NEI
NUCLEAR ENERGY INSTITUTE

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(3)

July 23, 1996

The Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

ATTENTION: Docketing and Service Branch

SUBJECT: Supplementary Notice of Proposed Rulemaking: Standard Design Certification for the U.S. Advanced Boiling Water Reactor and the System 80+ Standard Designs (61 *Fed. Reg.* 18099)

On behalf of the nuclear power industry, the Nuclear Energy Institute (NEI)* is providing these comments in response to the subject notice. We have previously commented, in a letter dated August 4, 1995, on the related Notice of Proposed Rulemaking (60 *Fed. Reg.* 17902 and 17924).

These design certification rulemakings mark the most significant milestone thus far in implementation of the NRC's major licensing reform initiative, 10 CFR Part 52. The achievement of this milestone reflects the investment of enormous resources and efforts by the design certification applicants and the broader nuclear industry, as well as the NRC. This investment of human and financial resources has paid off in standard designs of unquestionably enhanced safety and reliability. The Part 52 goal of safer, more reliable new nuclear plant designs has been emphatically achieved.

Unfortunately, however, the Part 52 goals of early resolution of safety issues and a predictable, stable licensing process have not been fully realized. The enclosed

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* NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilites, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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comments respond to a number of significant new licensing process issues raised in this supplementary notice, as well as several longstanding issues which are yet to be resolved. We urge the Commission to carefully consider the nuclear industry's perception of the impact of these issues on the workability of the Part 52 process.

We appreciate the opportunity to comment on this Supplemental Notice of Proposed Rulemaking. Any questions on our comments may be directed to me, Ron Simard or Russ Bell of our staff.

Sincerely,

Thomas E. Tipton

Enclosure

July 23, 1996

DETAILED INDUSTRY COMMENTS

ON THE

DRAFT FINAL DESIGN CERTIFICATION RULES

FOR THE ADVANCED BOILING WATER REACTOR

AND THE

SYSTEM 80+ STANDARD PLANT

(SECY-96-077)

Industry Comments on Supplementary Notices of Proposed Rulemaking's for the ABWR and System 80+ Standard Plant Designs (SECY 96-077)

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DESIGN CERTIFICATION RULES (SECY-96-077)

I. Finality

A. Introduction

A principal purpose of Part 52 is to create a more stable and predictable regulatory environment by resolving safety issues during design certification such that these issues have finality in later licensing proceedings (i.e., are not subject to re-review by the NRC or re-litigation in hearings). In this regard, 10 CFR 52.63(a)(4) states that "the Commission shall treat as resolved those matters resolved in connection with the issuance or renewal of a design certification," and Section 52.63(a) prohibits backfits by the NRC except as necessary for compliance with the NRC regulations in effect at the time of certification or to achieve adequate protection of the public health and safety.

When the proposed design certification rules were issued, the industry found the finality provisions to be inadequate and inappropriate because the scope of issues accorded finality was too narrow, changes made in accordance with the change process were not accorded finality, and the rule did not specifically provide for finality in all subsequent proceedings. As a result, and because this issue is a cornerstone of Part 52, the industry submitted extensive comments on the proposed rule regarding finality.

When the draft final design certification rules were issued, some progress had been made in this area. For example, the NRC broadened the scope of issues accorded finality to include: all nuclear safety issues associated with the information in the Final Safety Evaluation Report (FSER) and any supplements to it; the generic Design Control Document (DCD), including referenced information that is intended as requirements, such as referenced proprietary information; and the rulemaking record. The NRC also added language to the rule regarding the sufficiency of the design which provides additional protection against backfits, and expanded the types of proceedings in which the matters covered by a design certification are accorded finality.

However, we noted with concern a growing divergence between the industry and staff regarding certain provisions related to finality under Part 52. In the industry's view, the positions taken on these issues in the draft final rule and the public meeting on May 2, 1996, would significantly erode certainty and predictability. Specifically:

- NRC-approved changes to Tier 1, Tier 2* and unreviewed safety questions (USQs) do not have protection under 10 CFR 52.63 against subsequent NRC backfits;

- Tier 2 changes made in accordance with the Section 50.59-like process may be deprived of finality; and

- A de novo review of the standard design may be required for design certification renewal.

To ensure that Part 52 license proceedings have the viability intended by Part 52 and the Energy Policy Act of 1992, we believe that the NRC should not be allowed to impose backfits after the NRC has approved a change within the scope of the standard design certification unless the stringent backfit criteria of Section 52.63 are satisfied. Similarly, finality should be provided to changes made in accordance with the design certification change process. Moreover, language is needed that ensures an appropriate focus for NRC review in connection with design certification renewal. Finally, the standardized technical specifications should remain part of the certification and be accorded finality, consistent with previous Commission policy and extensive NRC/applicant interactions. Each of these issues is discussed in detail below. The status of the standardized technical specifications is discussed separately in Section II. Additionally, Sections E, F, and G, below, discuss important clarifications to the finality and change process provisions in Section 6(b) and 8(b) of the rules.

B. Changes approved by the NRC should have protection under Section 52.63 from backfits

All changes to Tier 1 and Tier 2*, and changes to Tier 2 that involve an unreviewed safety question or a change in the technical specifications, require prior NRC approval as well as an opportunity for a public hearing[1]. The draft final rules provide that these approved changes would not have finality under Section 52.63(a). (See Statements of Consideration (SOC) Sections II.A.1 and II.B.7; Rule Sections 6(b)(3) and 8(b)(6)(i); and statements by the NRC deputy general counsel at the NRC public meeting on May 2, 1996, Tr. 62-63.) Thus, such changes would be subject to potential NRC backfits under 10 CFR 50.109, which allows the NRC to impose backfits meeting a cost-benefit standard that are not otherwise required to assure adequate protection of public health and safety. As stated in our August 1995 comments on the proposed rules and explained more fully below, we believe that such changes should have finality under Section 52.63 after they have been approved by the NRC.

The more restrictive change control processes for changes to or affecting Tier 1, Tier 2*, or Tier 2 changes involving a change to the technical specifications or a USQ are appropriate and consistent with the generally greater safety significance

[1] While we generally agree with the rules' provisions in this regard, we do not agree, as discussed in Section X.C of this attachment, that Tier 2* changes that do not involve an USQ should be subject to a hearing opportunity.

of this information relative to Tier 2 information. As the NRC staff has observed in public meetings on Dec. 4, 1995 and July 15, 1996, a more restrictive process is also consistent with the Part 52 goal of standardization. However, it does not follow that once such changes are implemented in accordance with design certification requirements that they should lose Section 52.63 backfit protection, or that different backfit provisions should apply to changes made under differing provisions within Section 8 of the rules. Indeed, the staff's proposal would have the effect of applying different backfit standards to different components within the scope of the standard design. For example, unchanged components would be subject to Section 52.63 whereas modified components would be subject to Section 50.109. As a result, the staff's proposal would create undue complexity and the potential for confusion.

Additionally, we note that the draft final rules, supported by the Statements of Consideration, would accord Section 52.63 backfit protection to changes made without prior NRC approval under the "50.59-like" process. As discussed in the following section, we support this result for the final rules. It would be illogical not to accord such protection to other Tier 2 and Tier 1 changes considering these would be subject to a more rigorous change process, including prior NRC staff approval and a public hearing opportunity.

Furthermore, by subjecting approved changes to backfits under Section 50.109 rather than Section 52.63, the NRC would be creating uncertainty and instability. In particular, for the affected portion of the standard design, the benefits of Part 52 would be lost. In light of the substantial increase in safety achieved by these new standardized designs, such a result is clearly unwarranted. Also, depriving approved changes of protection under Section 52.63, could have the effect of discouraging changes that might actually increase the safety or effectiveness of the design. For all these reasons, the Commission should modify the rules to accord Section 52.63 backfit protection to changes that have been approved by the NRC.

C. Changes made in conformance with the Section 50.59-like process should have finality

The proposed rules included a Section 50.59-like process, whereby applicants and licensees can make changes in Tier 2 provided that such changes do not involve an unreviewed safety question. In our August 1995 comments on the proposed design certification rules, we stated that changes made under the Section 50.59-like process should have finality, and should not be subject to an opportunity for a hearing, because such changes would be within the envelope of the NRC's original safety finding on the standard design. Further, we stated that members of the public should be allowed to challenge these changes only by means of a petition under 10 CFR 2.206, consistent with the process governing such changes by Part 50 licensees.

In the draft final rules, the NRC agreed that changes properly implemented under the Section 50.59-like process are within the envelope of their original safety

finding and therefore should be matters resolved within the meaning of 10 CFR 52.63(a)(4). (See Section 6(b)(3) of the draft final rule.) The NRC included in Section 8(b)(5)(vi) an expedited review process, similar to that provided in 10 CFR 2.758, for contesting whether such changes were properly implemented.

The process proposed by the NRC appears to provide an appropriate balance between stability in the licensing process and the hearing opportunity for parties seeking to raise the issue of compliance with the Section 50.59-like change process. However, this aspect of the rule will require that NRC be attentive to assuring that only properly supported compliance contentions are subject to hearing, and that contentions regarding 50.59-like changes do not become an avenue for contesting the merits of the changes themselves.

However, at the public meeting on May 2, 1996, NRC's deputy general counsel, Martin Malsch, stated that the provision in Section 6(b)(3) of the rule may be in error, and that it may not be appropriate to give finality to 50.59-like changes. (Tr. 42-47.) For the reasons discussed in our comments on the proposed rule and in Section II.A.1 of the Statement of Considerations for the draft final rule, we believe that changes made under the Section 50.59-like process should have finality and protection under Section 52.63 against backfits. By definition, such changes do not adversely affect the safety of the standard design as approved by the NRC, and they are plainly within the envelope of the NRC's safety finding for design certification. As such, they are entitled to finality and protection under Section 52.63 against backfits. At the public meeting of July 15, 1996, the Director of NRR, speaking for the NRC senior management committee on the design certification rules stated his support of this position as reflected in the draft final rules. (Tr. pp. 67-71.) Therefore, the Commission should continue to include a provision in the rule which provides Section 52.63 backfit protection to Section 50.59-like changes.

D. A *de novo* review of the design is not required for design certification renewal

In our comments on the proposed rules, the industry requested that matters resolved in the design certification rule have finality in all subsequent proceedings. However, the draft final rules do not give finality to the DCD in design certification renewal proceedings, stating that it "would not be appropriate" to do so. Furthermore, at the public meeting on May 2, 1996, the NRC staff stated that a *de novo* review of the standard design was envisioned at the design certification renewal stage. (Tr. 52-55.) For the following reasons, the Commission should modify the final rule to extend finality to design certification renewal proceedings.

To begin with, the requirement for a *de novo* review is contrary to the basic structure for design certification renewal in the Commission's regulations. Section 52.59 establishes a three tiered process for renewal depending upon the extent of changes from the originally certified design. Specifically, Section 52.59 states that the Commission shall issue a rule granting renewal if the design "complies with the Atomic Energy Act and the Commission's regulations applicable and in effect at the

time the certification was issued . . . ." When the standard design is unchanged from the time of design certification, a *de novo* review of the design is unnecessary at the time of renewal because the Commission has already determined, at the original certification stage, that the standard design provides adequate protection of public health and safety and complies with the Atomic Energy Act and the Commission regulations applicable and in effect at the time of certification -- criteria that Section 52.63 makes applicable throughout the life of the design certification term. In other words, from both a regulatory and functional standpoint, the original design certification is in compliance with those criteria at the time of renewal.

Given the foregoing, there is no reason for the NRC to conduct a redundant *de novo* review at the design certification renewal stage. We would, moreover, underscore the fact that such a review would not only disregard the extensive safety reviews that undergird the original design certification, but would also impose an enormous, unwarranted cost burden on the renewal applicant – and, we would add, on NRC review resources – by making renewal tantamount to a wholly new certification. We believe, therefore, that the scope of the renewal review should be consistent with Sections 52.57 and 52.59 as well as the finality precept of Section 52.63(a). Specifically, the design certification rules, like Sections 52.57 and 52.59, should provide a review focus for renewal on:

- Updated data and information in the renewal application, as described below

- Modifications to the design certification, if any, proposed by the renewal applicant or by the NRC, consistent with the Part 52 requirements, as described below

Updated data and information in the renewal application should consist only of an evaluation of experience between the time of certification and the renewal application. For example, Table 1.8-22 of Tier 2 of the DCD for the Advanced Boiling Water Reactor (ABWR) contains a list of relevant NRC Bulletins, Information Notices, etc. For a renewal application, it should only be necessary to update this table for the period after certification, together with an explanation of whether the new experience indicates a need for a change in the standard design in order to (1) provide adequate protection of the public health and safety, (2) ensure compliance with NRC regulations in effect at time of the original certification, or (3) provide a substantial, cost justified increase in safety per Section 52.59. NRC review of the renewal application should focus solely upon this updated data and information and any modifications proposed by the renewal applicant. Other information in the DCD need not be reviewed at the time of renewal because it is unaffected by the experience between the time of certification and renewal.

If modifications to the original certified design are proposed by the renewal applicant, Section 52.59 provides that the Commission "shall grant the amendment request if it determines that the amendment will comply with the Atomic Energy

Act and the Commission's regulations in effect at the time of renewal." Thus, if the applicant proposes changes in the DCD, all that is required is for the NRC to review the changes based upon the provisions of the Atomic Energy Act and the Commission's regulations in effect at the time of renewal. Accordingly, under the structure established in Section 52.59, the standard design has Section 52.63 finality at the time of design certification renewal, except to the extent that changes are proposed by the renewal applicant.

The fact that the unchanged standard design has finality would not preclude the NRC from imposing backfits that satisfy the criteria in Section 52.59. At the time of renewal, the NRC could impose a backfit under Section 52.59(a) to achieve a substantial, cost-justified increase in safety. Additionally, at any time during the life of the design certification, the NRC may, under Section 52.63, impose backfits necessary to assure adequate protection of the public health and safety or compliance with NRC regulations in effect at the time the standard design was originally certified.

Finally, if substantial changes in the design certification have been made such that the request for renewal essentially constitutes a request for approval of a new standard design, Section 52.59 states that "an application for a design certification shall be filed in accordance with Sections 52.45 and 52.47 of this part." Only in this later case would a *de novo* review of the design be appropriate.

Without the presence of substantial changes, a *de novo* review would be a wasteful expenditure of industry and NRC resources. A *de novo* review would also undermine the Part 52 goal of early resolution of licensing issues and a stable and predictable regulatory process. Furthermore, a *de novo* review at the time of design certification renewal would essentially transform the renewal process into a re-certification of the standard designs. Such a result would clearly be at odds with the Commission's purpose in establishing the renewal provisions of Section 52.59. Therefore, the Commission should modify the statement of considerations accompanying the final rule and Section 6(b) to provide the DCD with finality in design certification renewal proceedings. The NRC should be allowed to impose backfits on the DCD at the time of renewal only by meeting the requirements in Section 52.63 or Section 52.59.

At the July 15 public meeting with senior NRC staff, the Director of NRR, William Russell, put forth the staff view that it was premature to define the scope of renewal review at this juncture and that this should be addressed on a later NRC rulemaking and/or future staff guidance document. It is noteworthy, however, that Mr. Russell expressed the view that "...if there is no adverse operating experience, and there are no significant changes to the rules and regulations, and the basis upon which you concluded it was acceptable is unchanged, there is no new information, then it should be a relatively straight forward review to accomplish." (Tr. p. 53.)

The foregoing is consistent, in substance, with the renewal review criteria proposed above and compatible with the requirements now contained in Sections 52.57 and

52.59. Such framework review criteria can, and should, be set forth in the design certification rules to which they will apply. This would not obviate the desirability of future staff guidance documents addressing implementing details of the renewal application and review process.

Should the Commission decide, however, to defer addressing the matter of renewal review at this time, we urge that it do so on a basis, and with an explanation, that does not prejudice future consideration of the scope of issue finality in the renewal process.

E. Section 6(b) should be changed to reflect the staff's intent regarding finality in enforcement proceedings

Section 6(b) of the draft final rule states that the DCD has finality in enforcement proceedings "where these proceedings reference this appendix." During the May 2, 1996, public meeting on the proposed final design certification rules, the industry questioned the meaning of the phrase "where these proceedings reference this appendix." In particular, the industry was concerned that this phrase could be construed as depriving finality to plants that reference the design certification rule in enforcement proceedings that do not explicitly reference the design certification rule. In response to industry's concern, NRC's deputy general counsel explained that the phrase was intended to limit finality of the information in the design certification rule to enforcement proceedings involving a plant referencing the rule, and that plants which do not reference the design certification rule would not be entitled to claim finality in enforcement proceedings. (Tr. 115.) The industry agrees with this clarification. Therefore, we ask that the Commission modify the last phrase of Section 6(b) to state "and enforcement proceedings involving plants that reference this appendix" to clarify the staff's intent, as shown in Table 1, below.

F. Section 6(b)(4) should be clarified regarding the finality of SAMDA evaluations

Section 6(b)(4) accords finality for severe accident design alternatives (SAMDAs) for plants referencing this design certification rule "whose site parameters are within those specified in the Technical Support Document" (TSD). The industry is concerned that this last phrase could open all SAMDAs to re-review and re-litigation during a subsequent proceeding where the licensee has requested an exemption from a site parameter specified in the DCD, even though the exemption has no impact on the SAMDA. This issue was discussed during the May 2, 1996, workshop where the Office of General Counsel(OGC) staff agreed that it was not the NRC's intent to re-litigate SAMDA issues under such circumstances. Specifically, Mr. Mizuno stated that it was the NRC's intent that an intervenor in any subsequent proceeding could challenge a SAMDA based on an exemption to a TSD site parameter only after "bringing forward evidence showing that the SAMDA analysis was invalidated." (Tr. pp. 57-63.) The industry agrees with this

position and recommends that Section 6(b)(4) be clarified to state that SAMDAs will have finality in subsequent proceedings absent a showing by an intervenor that the exemption to a site parameter has an adverse impact on the SAMDA evaluation. In this regard the industry believes that it is important for the language of Section 6(b)(4) to be modified rather than merely providing a clarification in the Statements of Considerations, as shown in Table 1, below.

G. Section 8(b)(5)(vi) should be modified to clarify that a Section 50.59-like change is not subject to hearing under Section 52.103 or Section 50.90 unless the change bears directly on an asserted ITAAC noncompliance or the requested amendment, respectively

The draft final rule also states that the process in Section 8(b)(5)(vi) for challenging Section 50.59-like changes may be used in the pre-operational hearing under 10 CFR 52.103 and in other adjudicatory hearings. The types of changes subject to hearing after issuance of the combined license (COL) should be limited to conform to the requirements of Part 52 and the Energy Policy Act. Specifically, during the May 2, 1996, public meeting on the draft final design certification rules, the NRC's deputy general counsel stated that a Section 50.59-like change may not be subject to hearing under Section 52.103 unless the change bears directly on an asserted noncompliance with an ITAAC acceptance criterion. Similarly, he also stated that a Section 50.59-like change may not be subject to hearings on a license amendment unless the change bears directly on the amendment request (Tr. 48-49). The industry requests that the Commission modify Section 8(b)(5)(vi) of the final rules, as shown in Table 1, below, to reflect the staff's intent as stated in the meeting.

H. Conclusion

Finality is essential to the viability of design certification. The draft final rules would unduly limit the matters entitled to finality, and the Commission should make changes in the rules to ensure that the standard design will have finality in future proceedings. Changes receiving prior NRC approval should have protection under Section 52.63 from subsequent NRC backfits. Similarly, Tier 2 changes made under the Section 50.59-like process should also have finality under Section 52.63. Finally, a de novo review of the standard design should not be required for design certification renewal. Table 1 suggests language for the design certification rules to accomplish these objectives.

TABLE 1

SUGGESTED RULE LANGUAGE FOR RESOLUTION OF FINALITY CONCERNS

Section 6(b).

The Commission considers the following matters resolved within the meaning of 10 CFR 52.63(a)(4) in subsequent proceedings for issuance of a combined license, amendment of a combined license, renewal of a combined license, design certification renewal proceedings (as consistent with § 6(e) herein), proceedings held pursuant to 10 CFR 52.103, and enforcement proceedings ~~where these proceedings reference this appendix:~~ involving plants that reference this appendix:

Section 6(b)(3).

~~Except as provided in Section 8(b)(5)(vi) of this Appendix, all departures from Tier 2 pursuant to and in compliance with the change processes in Section 8(b)(5) of this appendix that do not require prior NRC approval:~~ All changes to Tier 1, Tier 2* and Tier 2 made in accordance with the change process in Section 8.

Section 6(b)(4)

All environmental issues concerning severe accident design alternatives associated with the information in the NRC's final environmental assessment for the U.S. ABWR design and Revision 1 of the Technical Support Document for the U.S. ABWR, dated December 1994, for plants referencing this appendix whose site parameters are within those specified in the Technical Support Document. If an exemption is sought from a site parameter in the Technical Support Document, a severe accident design alternative will continue to have finality in all subsequent proceedings absent a showing that the exemption has an adverse impact on the specific severe accident design alternative evaluation.

(new) Section 6(e)

An applicant for design certification renewal shall update the application for design certification. The update shall consist of an amendment of Table 1.8-22 of Tier 2 for the ABWR and Tables 1.8-2, 1.8-3 and 1.8-8 of Tier 2 for the System 80+ to identify relevant experience between the time of certification and the renewal application. For each relevant experience, the updated application shall explain whether the standard design adequately accounts for the new experience and, if not, whether the new experience indicates a need for a change in the standard design in order to (1) provide adequate protection of the public health and safety, (2) ensure compliance with NRC regulations in effect at the time of the original certification, or (3) provide a substantial, cost justified increase in safety under 10 CFR 52.59. The NRC review of the renewal application will be limited to the updated data and information and any modifications proposed by the renewal applicant.

TABLE 1 (continued)

Section 8(b)(5)(vi)

A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a combined license or for operation under 10 CFR 52.103(a), who believes that an applicant or licensee has not complied with paragraph (b)(5) of this Section when departing from Tier 2 information, may petition to admit into the proceeding such a contention. In addition to compliance with the general requirements of 10 CFR 2.714(b)(2), the petition must demonstrate that the departure does not comply with paragraph (b)(5) of this Section. Further, the petition must demonstrate that the change bears on an asserted noncompliance with an ITAAC acceptance criterion in the case of a Section 52.103 preoperational hearing, or that the change bears directly on the amendment request in the case of hearings on a license amendment. Any other party may file a response thereto. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. The Commission may admit such a contention if it determines the petition raises a genuine issue of material fact regarding compliance with paragraph (b)(5) of this Section.

Section 8(b)(6)(i)[2]

An applicant for a combined license may not depart from Tier 2* information, which is designated with italicized text or brackets and an asterisk in the generic DCD, without NRC approval. ~~The departure will not be considered a resolved issue, within the meaning of Section 6 of this appendix and 10 CFR 52.63(a)(4).~~

[2] Section VII of this attachment identifies additional suggested modifications to Section 8(b)(6) relating to the industry recommendation that Tier 2* designations expire at first full power.

II. Finality for the Technical Specifications

A. Introduction

The Statements of Considerations for the proposed rules in SECY-96-077 reflect the industry comments that there should be one set of technical specifications subject to one change process. However, the draft final rule states that the technical specifications in the DCD will not have finality. For the following reasons, we believe the Commission should reject the approach proposed by the NRC staff and provide finality to the technical specifications in the DCD.

B. The standardized technical specifications in DCDs should remain part of the design certifications and be accorded finality because they have been reviewed and approved by the NRC

The technical specifications in the DCD were the result of a long and laborious development process. The staff requested that the design certification applicants submit technical specifications as part of their applications. As a result, the design certification applicants expended a significant amount of time, energy and resources in preparing technical specifications for inclusion in the DCD. Significant resources were also expended by the industry and staff during the NRC review process. At the conclusion of this process, the NRC staff approved the technical specifications as part of the FSER and Final Design Approval (FDA). The staff's current proposal to declare that the standard technical specifications are not part of the DCD, or that they are merely "conceptual information," in order to deprive finality to those technical specifications, would nullify the substantial efforts already expended by both the industry and NRC.

C. Withholding finality from the Tier 2 technical specifications would be inconsistent with established Commission policy and the design certification goals of early issue resolution, standardization, and licensing certainty

As discussed above, the technical specifications in the DCD have been reviewed and approved by the NRC through the FSER and FDA processes and have been subject to public comment as part of the Notice of Proposed Rulemaking (NOPR). If finality is not provided to the technical specifications in the DCD, they will be subject to re-review and re-litigation in every COL proceeding, even if the COL applicants make no changes in them.

This result is contrary to the purposes of Part 52. First, it is contrary to the goal of early resolution of licensing issues because it defers to the COL proceeding approval of those elements of the technical specifications that are generic elements associated with the standard designs. Second, it will result in a loss of standardization because the technical specifications for each standardized plant could be different as a result of the review and litigation process associated with

issuance of a COL. Finally, requiring that the technical specifications in the DCD, which have been approved as part of NRC staff's safety review of the designs, be subject to re-review and re-litigation at the COL stage is contrary to the Part 52 goals of issue finality and licensing stability.

During the public meeting on May 2, 1996, the NRC staff stated that it does not want to provide finality to the technical specifications because it wants to be able to impose changes to account for subsequent operating experience. (Tr. 30-34.) However, the Commission has made the policy decision that matters approved during design certification should not be subject to re-review and re-litigation, unless the stringent criteria in Section 52.63 are satisfied. Specifically, the Commission stated in its February 15, 1991, SRM on SECY-90-377,

> The Commission agrees with the staff that the process provides issue finality on all information provided in the application that is reviewed and approved in the design certification rulemaking.

Thus, the staff's proposal to withhold finality from the approved technical specifications based on subsequent operating experience is contrary to Commission policy, as well as the goals of Part 52.

D. The staff's current proposal is inconsistent with previous NRC guidance

In the past, both the NRC staff and the industry have agreed that the technical specifications should be part of the DCD and should have finality. In fact, the enclosure to the staff's August 26, 1993, letter to the design certification applicants stated that the technical specifications should be part of the DCD and should have finality. Further, this guidance identifies a number of concerns if the technical specifications were to be removed from the DCD. For example, in addition to expressing concerns regarding the possible loss of valuable insights gained during the design certification process, this guidance states:

> The staff requires that the STS [standard technical specifications] remain in Tier 2, because the STS are an integral part of the staff's review and approval process. Approval of the STS during the design certification affords a high degree of assurance that the as-built facility will be operated within the bounds of the SSAR.
>
> Removal of the STS from Tier 2 may jeopardize the concept of issue preclusion since the STS would not be approved by the design certification rule. Even though plant-specific STS will be issued for the COL, the staff believes that retaining the STS within the DCD would prevent a *de novo* review of the SSAR used for the agency's safety finding. Review of STS changes from the STS approved in the

DCD by the rule would limit the scope of the review and expedite plant licensing.

Moreover, this position was reaffirmed in NRC guidance issued in August 1994. Thus, the staff's proposal is contrary to its own implementation guidance - - guidance that formed the basis for design certification interactions.

E. The industry has proposed a logical, effective process for giving technical specifications finality while ensuring a single document and change process

A second reason expressed by the NRC staff at the public meeting on May 2, 1996, for proposing to deprive the technical specifications in the DCD of finality was to address the industry's comment that there should be a single set of technical specifications subject to a single change process. (Tr. 30-31.) However, in addressing this industry comment, the staff's proposal ignores the more fundamental industry recommendation that the technical specifications be accorded finality and unnecessarily undermines Commission policy concerning finality of design certification information.

Consistent with Commission policy and long-held understandings, NEI's August 4, 1995, comments on the NOPR proposed that the technical specifications in the DCD have finality and be used by a license applicant to develop a single, integrated set of technical specifications for submittal with license applications. This integrated set of technical specifications would include the technical specifications in Chapter 16 of Tier 2, including any proposed changes, and the supplementary site-specific technical specifications developed by the license applicant. To the extent the integrated technical specifications conform to those in the DCD, they would have finality and would not be subject to re-review or re-litigation. Thus, only proposed changes and the site-specific portion of the technical specifications would be subject to NRC review and a hearing as part of the COL proceeding.

After the license is granted, the technical specifications in the DCD would no longer have any relevance to the license, and there would be a single set of technical specifications that will be controlled by the Section 50.90 license amendment process and subject to the backfit provisions in Section 50.109. Thus, the industry's proposal provides for finality of the approved technical specifications in the DCD and ensures creation of a single set of technical specifications subject to a single change process. This approach is consistent with the goals of early issue resolution, standardization, and licensing stability, and creates a workable product for use by licensees and the NRC during operation of a plant.

F. July 15 Discussion with NRC senior management

During the July 15, 1996, public meeting between the staff and the industry, there was considerable discussion of the staff's rationale for proposing a change to the long-held position on the finality of the standardized technical specifications. This section attempts to condense from the meeting transcript the rationale put forth by the staff and provide a response. As discussed below, because of the importance of consistently applying the principle of finality as established by Part 52 and the Commission, and in light of the availability of existing processes for reflecting future operating experience into ABWR and System 80+ standardized technical specifications, as appropriate, the design certification rules should accord finality to the Tier 2 technical specifications.

1. **NRC:** A single change process is necessary for all plant technical specifications.

   Industry: We concur. Under the industry proposal, only one process will be in effect for all of the plant's technical specifications during the period of the COL.

2. **NRC:** The ability to reflect future operational experience in the technical specifications will not exist if the Tier 2 technical specifications are given finality via the design certification rules.

   Industry: If an issue arises that calls into question adequate protection of public health and safety, the NRC may, indeed must, take appropriate action, including the imposition of technical specifications changes, if appropriate. Further, giving finality to the DCD technical specifications does not preclude the NRC staff from seeking voluntary improvements by COL applicants and licensees. As noted by Mr. Russell, the NRC is working effectively with licensees today in exactly such a voluntary fashion to bring about technical specifications improvements within the Technical Specifications Improvement Program. Mr. Russell stressed that the NRC has not needed to impose technical specification changes on licensees. There is no reason to think such a voluntary process would not also be effective in the context of standardized ALWR technical specifications, and therefore, this is not a reason to withhold finality from the ABWR and System 80+ technical specifications. This notwithstanding, after the COL is issued, the backfit provisions of Section 50.109 are available to the NRC for imposing changes on ALWR technical specifications, as is the case today for currently operating plants.

3. **NRC:** Much effort has already been put into the Technical Specifications Improvement Program for current plants, and this program should be used for ALWRs.

   Industry: Much effort was also put into the generic technical specifications for the ABWR and System 80+. Moreover, it should not be presumed that future improvements to standardized technical specifications for current plants will be

appropriate to incorporate into the standardized technical specifications for the ABWR and System 80+. The designs and safety margins of the advanced plants set them far apart from current plants such that it cannot be assumed that changes to those industry technical specifications should be automatically imposed on ALWRs.

4. **NRC:** The staff would impose current plant technical specification improvements only if they can be justified under Section 50.109.

   Industry: The draft final rules have no such provision. The NRC staff would not be constrained by Section 50.109 in the context of an application for a COL. The standardized technical specifications in the DCDs must not be open to re-review by the NRC staff at COL.

5. **NRC:** The bracketed information is not resolved, so there will be some level of technical specifications review at COL, anyway.

   Industry: The bracketed items in the DCD technical specifications are information which is preliminary at the design certification stage for which finality is not being requested. This information will be subject to NRC review and public hearing at time of COL. The industry is not concerned that this information does not have finality because the designs upon which the preliminary information is based and the framework for these technical specification parameters are finalized. However, non-bracketed information was extensively reviewed and should be resolved with finality by these design certifications.

6. **NRC:** The principal issue is the NRC desire to use the current plant process to incorporate those changes relating to operational matters (i.e., limiting conditions for operation, surveillance activity, frequency of surveillance, etc.). The intent is that features of the standard design will not be backfit as a result of this process unless the criteria of Section 52.63 are met.

   Industry: We appreciate that the staff does not intend to backfit the standard designs based on operating experience reviews related to technical specifications. However, as stated before, giving finality to the DCD technical specifications does not preclude the NRC from using its normal process for seeking technical specification upgrades. From the industry perspective, the principal issue is ensuring that the full benefits of design certification are achieved, consistent with Part 52 goals, Commission policy and previous understandings.

7. **NRC:** The concept of using one set of technical specifications for the industry is important in the broader context of ensuring well understood and consistent regulatory requirements as it relates to conduct of inspection activities and other things.

   Industry: What is important in achieving the objectives of Part 52 is that the principle of finality be consistently applied. Like all other matters in the DCDs, matters associated with the generic standardized technical specifications have already been resolved. If the COL applicant concurs that a change emanating from the Technical Specifications Improvement Program for current plants is applicable to the standard design and has overriding merit, the COL applicant/ holder may, under the industry proposal, amend its application/license to do so.

G. Conclusion

Substantial effort was expended by the industry and the NRC staff in preparing and reviewing the ABWR and System 80+ standard technical specifications. As a result of this process, the technical specifications in the DCD were approved by the NRC staff as the appropriate technical specifications for these standard plants. Depriving the technical specifications of finality is contrary to Commission policy and related NRC staff implementation guidance underlying the design certifications. Moreover the staff proposal is contrary to early resolution of licensing issues, standardization, and a stable and predictable regulatory process, objectives which are at the heart of Part 52. The process recommended by the industry ensures a single technical specifications document and change process for licensees and provides opportunity for upgrades to reflect operating experience, consistent with current practice for existing plants. Therefore, the Commission should modify Section 2(d)(1) and Section 3(e) of the rules to provide finality to the technical specifications in the DCD and should adopt the additional language proposed in NEI's comments of August 4, 1995 (repeated in Table 2, below).

TABLE 2

SUGGESTED ADDITIONAL PROVISION FOR SECTION 2(d)(5) OF THE FINAL RULES TO CLARIFY THE STATUS OF THE PROPOSED TECHNICAL SPECIFICATIONS IN CHAPTER 16 OF TIER 2

Proposed technical specifications for the portion of the plant within the scope of the standard design. These proposed technical specification are applicable to an applicant for a combined license or operating license referencing this design certification rule, and shall be incorporated in the technical specifications in the license, except as changed pursuant to the provisions in Section 8 of this design certification rule that apply to changes to Tier 2 information. Changes in the proposed technical specifications by a license applicant are subject to NRC review and approval and a hearing as part of the license proceeding. After issuance of the combined license or operating license, the proposed technical specifications in Tier 2 have no further effect as to that licensee, and the technical specifications in the license become effective.

III. Newly Proposed Section 4 Should be Substantially Revised, Including Deletion of the Proposed Additional Operational Requirements and Backfit Provisions

A. Introduction

The draft final design certification rules contain a new Section 4, "Applications and Licenses Referencing This Design Certification: Additional Requirements and Restrictions." This new section includes a provision reserving NRC's right to impose backfits for operational issues, and three former "applicable regulations" pertaining to operational issues that have been redesignated as additional "operational requirements." As discussed below, these new additional requirements and restrictions are unnecessary and inappropriate for inclusion in these design certifications and should be deleted from the final rules.

B. The backfit provisions in Section 4(c) contradict 10 CFR 52.63 and are incompatible with the purpose of Part 52

Section 4(c) of the draft final design certification rules attached to SECY-96-077 states as follows:

> Facility operation is not within the scope of this appendix, and the Commission reserves the right to impose requirements for facility operation on holders of licenses referencing this appendix by rule, regulation, order, or license condition.

The Statement of Considerations for the draft final rules states (p. 47) that this section may be used by the NRC to impose requirements for post-fuel load operational safety "for portions of the plant within the scope of this design certification, e.g., start-up and power ascension testing" (which is discussed in Chapter 14 of Tier 2 of the Design Control Documents (DCD)). Furthermore, SECY-96-077 states on page 3 that this section "preserves NRC's flexibility to backfit future rules on operational matters such as steam generator tube plugging criteria even though such rules may affect the design incidentally." Finally, in discussions with the industry, members of the NRC staff have stated that Section 4(c) is intended to allow the NRC staff to backfit standard design certifications without regard for the backfit protections of Section 52.63. As the staff recognized in SECY-96-077, Section 4(c) would leave "important safety issues unresolved and subject to future litigation and backfitting."

Section 4(c) contradicts 10 CFR 52.63 and is inconsistent with the purpose of Part 52 to the extent that it allows the NRC to impose backfits unrestricted by Section 52.63 with respect to matters resolved in the DCD. Section 4(c), as written, thus would defeat a principal aim of Part 52 – a stable and predictable licensing process. For these reasons, Section 4(c) should be clarified to state that it pertains to matters outside the scope of the standard design. To the extent the Commission

imposes new requirements that affect information in the design certification, the backfit restrictions in Section 52.63 and Section 8 of the rules should apply.

1. Proposed Section 4(c) is not needed to enable the NRC to impose operational requirements outside the scope of the DCD

There are a number of operational-related matters that are outside the scope of the DCD. For example, Tier 2 of the ABWR and System 80+ DCDs identifies that the following matters are outside the scope of the DCD:

Section 13.1 - Organizational Structure
Section 13.2 - Training of Plant Staff
Section 13.3.2 - Emergency Planning
Section 13.4 - Review and Audits
Section 13.5 - Plant Procedures
Section 13.6 - Security Plan

Section 4(c) is unnecessary to the extent that it pertains to these and other operational issues that are outside the scope of the standard design. By definition, Section 52.63 and the change control process in Section 8 of the design certification rules only pertain to matters within the scope of the standard design. Thus, the NRC is not restricted by Section 52.63 and Section 8 from imposing new operational requirements on matters outside the scope of the standard design.

In this regard, there is a clear demarcation in the DCD between matters that are within the scope of the DCD and those matters that are outside the scope of the DCD. In preparing the Standard Safety Analysis Reports (SSARs) and the corresponding Tier 2 provisions, the design certification applicants followed the guidance for final safety analysis reports (FSARs) contained in Regulatory Guide 1.70 and the Standard Review Plan (NUREG-0800). As a result, every issue that is required to be addressed in an FSAR either is addressed in the SSARs and Tier 2, or there is a statement in the appropriate location in the SSARs and Tier 2 that the matter is to be addressed by combined license (COL) applicants (such matters are called "COL Information Items"). A comprehensive listing of the COL Information Items is provided in Chapter 1 of the SSARs and Tier 2. Because these COL Information Items are the responsibility of the COL applicants, the NRC and COL applicant will determine appropriate requirements related to those items, consistent with NRC regulations, during the COL proceeding.

2. Contrary to Section 52.63, proposed Section 4(c) would enable backfitting of operational-related requirements of the DCD

The DCD contains numerous requirements governing a wide range of design-related matters that pertain to operation. For example, Tier 2 of the DCD has the following provisions:

- Section 14.2 contains requirements governing start-up and power ascension testing
- The system descriptions for numerous systems contain requirements governing inservice inspection and testing
- Section 19Q.10 (ABWR) and Section 19.8 (System 80+) contain requirements governing shutdown conditions

Each of these provisions was reviewed and approved by the NRC, and each of these provisions comes within the finality provisions in Section 6 of the design certification rule.

Per Part 52, these provisions are entitled to finality, including protection against backfits. As stated in the Statements of Consideration for Part 52, design certification is the key procedural device for achieving one of the primary goals of Part 52 - - namely, the early resolution of safety issues. To help accomplish this goal, 10 CFR 52.63(a)(1) and 52.63(a)(3) prohibit the NRC from imposing new requirements on a design certification or a plant referencing a design certification, except as necessary to bring the certification or the referencing plants into "compliance with the Commission's regulations applicable and in effect at the time the certification was issued, or to assure adequate protection of the public health and safety or the common defense and security." The provisions in Section 52.63(a) are implemented in Section 8 of the proposed rules, which prohibits the NRC from making generic or plant-specific changes in Tier 1 or Tier 2 of the DCD except in accordance with the requirements in Section 52.63(a). To allow the NRC to impose backfits on the DCD, for reasons other than adequate protection or compliance with NRC regulations, is wholly contrary to the finality provisions in Section 52.63.

3. Contrary to Section 52.63, proposed Section 4(c) would lessen restrictions on backfitting of design requirements of the DCD

Equally, if not more troubling than the potential for unfettered backfits on operational-related requirements of the DCD, would be the use of proposed Section 4(c) to enable backfits, based on operational experience, of Tier 1 or Tier 2 design requirements. Because of the inherent connection between design provisions and plant operation, new operational issues or lessons learned from operating experience could be construed by the NRC staff as basis for Section 4(c) backfitting of most, if not all, of the design provisions in the DCD. For example, operational experience might be cited by the staff as the basis for imposing backfits related to component reliability, materials of construction, system configurations, etc., that are different from those specified in the DCD.

The possibility that an unrestricted backfit of the standard design certification - - once cast as a lesson learned from operational experience - - could be imposed by the NRC is profoundly destabilizing and contrary to both the letter and spirit of Part 52. It would have the unmistakable effect of depriving the standard designs of finality and stability.

This situation is all the more troubling because Section 4(c) contains no restrictions on backfits. In particular, in order to impose backfits under Section 4(c), the NRC need not demonstrate that the backfit is necessary for adequate protection or compliance with NRC regulations, nor is it even necessary for the NRC to demonstrate that the safety benefits of the backfit outweigh the costs. Instead, Section 4(c) would allow the NRC to impose backfits without making any showing whatsoever, other than connecting the backfit to an operational issue or operating experience. Thus, Section 4(c) provides less protection against backfits than is currently provided to Part 50 plants. Obviously, this situation would seriously threaten the viability of the design certification rules to potential future users.

At the July 15, 1996, public meeting, the staff stated that it was not the intent of Section 4(c) to provide for backfits on the design (Tr. pp. 38-39), but rather to reserve the ability to issue requirements for as yet unresolved operational issues. The industry appreciates this important clarification. However, as discussed above, the DCD contains numerous requirements governing a wide range of issues pertaining to plant operation. To the extent that these matters were reviewed, approved and incorporated into the DCD, they should be accorded backfit protection under Section 52.63.

4. Proposed Section 4(c) is contrary to clear Commission policy guidance

Proposed Section 4(c) is contrary to clear Commission policy guidance provided in the February 15, 1991, SRM on SECY-90-377,

> The Commission agrees with the staff that the process provides issue finality on all information provided in the application that is reviewed and approved in the design certification rulemaking.

As described in Sections 1 and 2, above, the finality and backfit protection provisions for the design certification were established by the Commission in Section 52.63. All of the information contained in the DCD has been reviewed and approved by the NRC staff and is resolved within the meaning of Section 52.63(a)(4) via the design certification rulemakings. The design certification rules should in no way diminish Section 52.63 protections for information contained in the DCD.

5. Summary

In sum, Section 4(c) contradicts the provisions of Section 52.63 of the Commission's regulations. Further, it creates a means for uncontrolled and destabilizing backfits. Therefore, to comply with the Commission's own regulations and to promote the stability and predictability of the design certifications (which is a primary goal of Part 52), this provision should be clarified. To the extent that the Commission imposes new requirements affecting information in the design certification, whether design or operational in nature, the backfit restrictions in Section 52.63 and Section 8 of the rule should apply. Suggested language for this clarification is provided in Table 3.

C. The design certification rules should not be used to impose additional "operational requirements"

Several of the additional "applicable regulations" in the April 1995 proposed design certification rules pertained to licensees' operational programs and did not address the specifics of the standard design. As a result, we requested in our comments on the proposed rules that these operational program requirements be deleted from the final rules. In meetings with the Commission on March 8, 1996, and with the industry on March 25, 1996, the NRC staff agreed that these operational-related "applicable regulations" should be deleted. However, in the draft final rules, the operational-related "applicable regulations" were not deleted. Instead, they were transferred to Section 4 of the rules and redesignated as "operational requirements."

As discussed in our comments on the proposed design certification rules, the industry strongly opposes the NRC staff's approach regarding additional "applicable regulations," including those redesignated as "operational requirements" in Section 4 of the draft final rules. We continue to oppose these operational requirements for the same reasons we oppose the additional "applicable regulations," as discussed in Section IV of this attachment. These reasons are summarized below.

First, there is no requirement in Part 52 which compels the Commission to adopt these additional operational requirements. To the contrary, 10 CFR 52.48 defines the applicable standards for design certification as the technically relevant standards in Parts 20, 50, 73, and 100, and Section 52.81 has similar provisions with respect to COL applications. Section 52.48 and Section 52.81 do not provide any authorization for the NRC to identify additional operational requirements and such identification is contrary to these sections.

Second, these operational requirements add a destabilizing layer of regulation above the operational requirements imposed by Part 50 on operating reactor licensees. Furthermore, these additional operational requirements are not necessary for the adequate protection of public health and safety or the common defense and security. Thus, there is no basis for imposing these requirements on plants that reference the design certifications.

Third, in our comments on the proposed rules, we expressed the concern that the broadly worded additional "applicable regulations" could be used by the staff to impose backfits on applicants and licensees that could not otherwise be justified on the basis of adequate protection of public health and safety. In response to this particular concern, the draft final rules include backfit protections for the "applicable regulations." However, by redesignating the operational "applicable regulations" as additional operational requirements (i.e., by moving them from Section 5 of the proposed rules to Section 4 of the draft final rules), the backfit protections for the additional "applicable regulations" included in the draft final rules would not apply to these operational requirements. Therefore, there is no protection against destabilizing compliance backfits with respect to these additional operational requirements.

The potential for backfits is all the more troublesome given that the NRC staff continues to use "broadly stated" language that is vague and subject to misinterpretation in drafting these operational requirements. Inclusion of such vaguely worded provisions makes them especially susceptible to future backfits by the NRC staff. For example,

- The phrase "non-intrusive techniques available twelve months prior to the date ... " from Section 4(b)(1) fails to recognize that licensees are required to use techniques contained in an edition of the ASME Code that the NRC has endorsed. Furthermore, the proposed requirement is vague in the sense that inspection technologies are developed over a period of time as they transition through conceptual design, prototype development, commercial availability, qualification, and industry application. Thus, the precise time of availability is subject to varying interpretations.

- The Section 4(b)(2) requirement is vague and open-ended. The "features" included in the outage planning and control program and the method of "consideration" of fire, flood and other hazards during shutdown and low power operation are not defined and are subject to multiple interpretations.

Where needed to support the NRC staff's safety review of the designs, the DCDs contain specific requirements related to operational matters. With respect to pump and valve inservice inspection and testing programs, for example, licensees will implement the requirements of the ASME Boiler and Pressure Vessel Code, as endorsed by the NRC in 10 CFR 50.55a, as well as commitments such as "the use of advanced non-intrusive techniques to periodically assess degradation and performance characteristics of check valves." (Section 3.9.6.2.3.3 of the System 80+ DCD.) With respect to outage planning and control, licensees will implement various commitments such as technical specifications that address shutdown risk. and COL action items that require applicants to "develop appropriate administrative controls, procedures and operator training for shutdown operations." (COL Item 19.9 for the System 80+ and 19.11 for the ABWR.) Finally, the requirement for a design reliability assurance program exists already as a Tier 1 (ITAAC) commitment, and reliability assurance will be the subject of future rulemaking as directed by the Commission in the July 1994 Staff Requirements Memorandum on SECY-94-182, "Probabilistic Risk Assessment Beyond Design Certification."

However, unlike the specific operations-related requirements contained in the DCDs, the proposed additional requirements address operational programs. Because plant operation is the responsibility of the COL applicant or licensee, not the design certification applicant, it is inappropriate to include provisions governing operational programs in the design certification rules. In this regard, the promulgation of these operational requirements is inconsistent with Section 4(c) of the design certification rules, which states that "facility operation is not within the scope of this appendix."

As previously noted, the NRC staff stated in the public meeting on March 25, 1996, that they were prepared to delete operational-related "applicable regulations" from the design certification rules on the basis that these topics were beyond the scope of design certification and were therefore subject to later rulemaking. The staff's reasoning and proposal provide further indication that it is not necessary to include in the final design certification rules the operational program requirements in Sections 4(a) and 4(b), which correspond to the "applicable regulations" previously marked for deletion.

In sum, the industry strongly opposes the concept of additional operational requirements because they are beyond the scope of the design certifications and are equally, if not more, problematic than the proposed "applicable regulations" in terms of their destabilizing effect on the Part 52 process.

D. Section 4(d) should be revised to reflect the Part 52 provisions allowing reference to the design certifications in Part 50 proceedings

At the May 2, 1996, public meeting, the NRC staff suggested that they were re-evaluating, and would reserve a decision, as to "whether" a design certification could be referenced in a Part 50 application for a construction permit or an operating license. (Tr. at 72-81.) This staff position is reflected in Section 4(d) of the draft final rules which states the "Commission reserves the right to determine whether and in what manner this [design certification] appendix may be referenced by an applicant for a construction permit or operating license under Part 50." We are concerned because, as pointed out during the May 2 meeting, Part 52 does not raise any question whatsoever about "whether" a design certification may be referenced under Part 50. In fact, Part 52 explicitly provides, in Sections 52.55 and 52.63, that a certification may be referenced by construction permit and operating license applicants under Part 50. Hence, the draft final rules are inconsistent with Part 52 and suggest a course that would unduly limit the usefulness of the design certification rules.

In its comments on the NOPRs for the design certification rules, the industry expressed its strong desire to retain the Part 50 licensing option as a fallback alternative in the event Part 52 proved difficult or impossible to implement. Moreover, industry stated its belief that the finality of the design could and should be preserved in a Part 50 licensing proceeding, and that adherence to ITAAC need not and should not be required under Part 50. (See NEI comments on the NOPRs at Section X.) With the draft final design certification rules, the staff appears to have gone backwards. Specifically, Section 4(d) of the draft final rules states,

> "The Commission reserves the right to determine whether and in what manner this [design certification] appendix may be referenced by an applicant for a construction permit or operating license under Part 50."

In the public meeting on May 2, 1996, the staff indicated a clear preference for prohibiting altogether an applicant's ability to utilize the design certification in a Part 50 proceeding. The industry sees no justification for this regressive approach, which would needlessly limit the usefulness of the design certifications. Furthermore, as stated above, such a prohibition would be inconsistent with the express language of Sections 52.55 and 52.63.

The industry requests that the Commission adopt the position that appeared to have been taken by NRC staff at the December 1995 public meeting, i.e., that determination of the treatment of Part 50 issues should be deferred to a later time, and that nothing should be done now in the design certification rules to preclude or expand upon Part 52's current provisions allowing Part 50 applicants and licensees to reference a design certification. At the public meeting on July 15, 1996, NRC senior management appeared to reaffirm this course. Accordingly, Section 4(d) should be revised as recommended in the appended rule language, or alternatively, such revised language should be set forth in the Statements of Consideration for the final design certification rules.

E. Conclusion

Section 4 of the draft final rules should be substantially revised. Table 3 provides suggested language for Section 4 of the final design certification rules that addresses the following issues as discussed in this section:

- Section 4(c) contradicts Section 52.63 and is incompatible with Commission policy and the goals of Part 52 because it would allow the NRC to impose backfits on the DCD without demonstrating that the backfit is needed for adequate protection of safety or compliance with NRC regulations. As a result, Section 4(c) would subvert Section 52.63 and undermine achievement of the Part 52 objectives of issue finality and licensing stability. Thus the proposed Section 4(c) threatens the viability of the design certification rules and the Part 52 process, and it should be modified to allow only the imposition of new requirements that are outside the scope of the DCD, unless the backfit restrictions of Section 52.63 and Section 8 of the rules are met.

- The former "applicable regulations" pertaining to operational programs that have been relocated and recast as "additional operational requirements" are inappropriate to include in final design certification rules -- in any form. Therefore, Section 4(b) and corresponding Sections 4(a)(2)(vii), (viii), (ix), and 4(a)(4) should be deleted.

- Section 4(d) should be modified to indicate that the Commission reserves the right to determine "in what manner" this Appendix may be referenced by a Part 50 applicant.

Table 3

SUGGESTED LANGUAGE FOR SECTION 4 OF THE DESIGN CERTIFICATION RULES

4. Applications and licenses referencing this design certification: additional requirements and restrictions.

(a) An applicant for a combined license that wishes to reference this Appendix shall, in addition to complying with the requirements of 10 CFR 52.77, 52.78, and 52.79, comply with the following requirements:

(1) Incorporate by reference, as part of its application, this appendix;

(2) Include, as part of its application:

(i) A plant-specific DCD containing the same information and utilizing the same organization and numbering as the generic DCD for the [U.S. ABWR or System 80+] design, as modified and supplemented by the applicant's exemptions and departures;

(ii) The reports on departures from and updates to the plant-specific DCD required by Section 10(b) of this Appendix;

(iii) Technical specifications for the plant that are required by § 50.36 and § 50.36a;

(iv) Information demonstrating compliance with the site parameters and interface requirements;

(v) Information that addresses the COL Information Items, including justifications for any deviations from or omissions of the COL Information Items; and

(vi) The information required by 10 CFR 52.47(a) that is not within the scope of this rule.

(3) Physically include, in the plant-specific DCD, the proprietary information and safeguards information referenced in the U.S. ABWR DCD; and

(b) (not used.)

(c) Facility operation is not within the scope of this appendix, and the Commission reserves the right to impose requirements for facility operation on holders of licenses referencing this appendix by rule, regulation, order, or license condition; provided, however, that to the extent the Commission imposes new requirements affecting information in the design certification, it must satisfy the requirements of 10 CFR Section 52.63 and Section 8 of the rule.

(d) The Commission reserves the right to determine in what manner this appendix may be referenced by an applicant for a construction permit or operating license under 10 CFR Part 50.

IV. "Applicable Regulations"

A. Introduction

In SECY-90-016 and SECY-93-087, the NRC identified a number of positions on severe accidents and other technical issues that are not embodied in current NRC regulations in Part 50, and the staff applied these positions, as approved and modified by the Commission, during its review of the design certification applications. Notwithstanding that Part 50 does not require these features, the design certification applicants voluntarily agreed to include the features in their designs, and then demonstrated that their standard designs conformed with these positions. Despite this clear demonstration of conformance with these positions and the Commission's policies, the NRC staff has proposed to elevate these technical positions to the status of "applicable regulations" for the purpose of 10 CFR 52.48, 52.54, 52.59, and 52.63 and included them in the proposed rules.

In issuing the proposed rules, the Commission specifically requested comments on whether the additional "applicable regulations" should be adopted, in whole or in part, in the design certification rulemakings. The industry responded by stating its continuing strong opposition to including additional "applicable regulations" in the proposed rules. As discussed below, the staff's latest proposal does not resolve the industry's concerns, and we continue to strongly oppose the staff proposal to include these additional "applicable regulations" in the design certification rules.

B. The proposed new "applicable regulations" would constitute NRC regulation to the state-of-the-art of technology

The NRC staff proposal goes beyond a question of technical preference in implementing the design certification rules. By elevating technical positions to the status of "applicable regulations," the NRC would essentially be regulating to the state-of-the-art in technology, a wholly new regulatory threshold. The advanced-design nuclear power plants are 10 to 100 times safer than today's safe nuclear plants. The NRC staff proposal would apply fluid new regulatory requirements to advanced-design plants that already far exceed the requirements of existing regulations and the Commission's safety goals. The establishment of another layer of NRC regulations - - the proposed additional "applicable regulations" - - can be and is being viewed as penalizing advanced plants for incorporating design features that enhance safety.

The NRC staff proposal to codify new "applicable regulations" would constitute an unsettling new regulatory paradigm which could impact other forms of NRC regulation, including the regulatory threshold for currently operating plants and might subject the NRC and current licensees to criticism that existing plants do not meet NRC regulations. The design certification rules should not be the occasion for fundamentally altering the direction and emphasis of NRC regulation through the codification of the proposed new "applicable regulations."

C. "Applicable regulations" would be adverse to licensing stability and thus the viability of the Part 52 process

1. "Applicable regulations" would undermine explicit change process provisions established by the Commission in Section 52.63

The staff's proposal on "applicable regulations" is contrary to a principal purpose of Part 52 - - creation of a predictable, stable licensing process. In particular, the proposal creates the potential for backfits to be imposed on portions of the standard designs governed by the new "applicable regulations" to meet a subjective, new regulatory threshold - - "improved" protection of public health and safety. In so doing, the proposal would substantively modify explicit Part 52 change process provisions of Section 52.63 that were established and twice reaffirmed by the Commission. Section 52.63 precludes backfits unless required to assure adequate protection of the public health and safety or compliance with NRC regulations. The proposed "applicable regulations" would fundamentally and adversely alter Part 52 - - and the viability of the Part 52 process itself - - after hundreds of millions of dollars have been invested by the industry and the Department of Energy.

2. It is unnecessary and inappropriate to include new "applicable regulations" in design certification rules

We have previously emphasized the following points in our August 4, 1995, and March 5 and May 31, 1996, submittals to the Commission and during the Commission briefing of March 8, 1996.

- Part 52 does not require that additional "applicable regulations" be codified as part of the design certification rules. Indeed Section 52.48 defines the applicable standards for design certification as the technically relevant standards in Parts 20, 50, 73 and 100. As examined thoroughly by EPRI in their May 1, 1996, letter to the Commission and Section F below, we believe that it has not been the Commission intent to codify agency technical positions as new "applicable regulations" in the design certification rules.

- "Applicable regulations" are not required to assure adequate protection of the public health and safety; they do not improve the safety of the standard designs; and they are not necessary to meet the Commission's objective that future plants achieve a higher level of safety. Indeed, there is agreement that the requirements of the ABWR and System 80+ DCDs satisfy all of the technical positions that the staff has proposed be codified as "applicable regulations" and that these designs are 10-100 times safer than today's safe nuclear plants.

  The proposed "applicable regulations" may be and are being viewed as a penalty on future owner/operators who will consider utilizing the Part 52 process to build advanced-design plants.

- "Applicable regulations" are not needed to control changes by an applicant or a licensee. The NRC's technical positions are implemented principally through Tier 1 requirements, which are subject to the most stringent change controls under Part 52. Each is also addressed by more detailed Tier 2 requirements, which are also subject to stringent change controls that preclude potential for adverse effect on the safety of the design.

- Codifying "applicable regulations" is not necessary to provide a basis for evaluating future changes. As expressed by Commission Rogers at the March 8 Commission briefing, the development of, and bases for, the NRC's technical positions that are proposed as "applicable regulations" have been the subject of numerous SECYs, SRMs and public meetings of the NRC staff, ACRS and Commission. The ultimate implementation of the technical positions is described in the ABWR and System 80+ FSERs and DCDs. This extensive information provides a detailed public record of the NRC staff's review and approval of specific design requirements related to satisfying each of the technical positions in question. As noted by Commissioner Rogers, this body of information will provide the basis for the NRC to evaluate the acceptability of proposed design changes, just as this information provided the basis for the staff to determine the original acceptability of the designs in the FSERs. We also agree with Commissioner Rogers' comments to the effect that establishing new regulations corresponding to specific design certification requirements, e.g., severe accident features, is unnecessary and inappropriate as a means to control operational practices of licensees.

- The NRC staff proposal would establish the first-ever severe accident regulations, contrary to existing Commission policy and practice on severe accidents and safety goals.

- The NRC staff stated in SECY-96-028 that their concern was with the potential identification of significant new information. For plants licensed under Part 52 as well as Part 50, if significant new information is identified that calls into question the adequate protection of the public health and safety, the NRC has the authority to impose a backfit or other corrective action, as appropriate. Beyond that, the Commission structured the Part 52 provisions on certification renewal rulemaking to provide opportunity for the NRC staff to impose additional cost-justified requirements that may result from the identification of significant new information. Except at the time of design certification renewal, Part 52 expressly prohibits imposition of backfits, except to assure adequate protection of the public health and safety or compliance with NRC regulations.

In sum, the industry strongly believes that the inclusion of these additional "applicable regulations" in the design certification rules is unnecessary, destabilizing, and contrary to existing law and regulations.

D. The wording of the additional "applicable regulations" is vague and inconsistent with previous Commission directions

We have evaluated the wording of each of the proposed additional "applicable regulations" and concluded that the additional "applicable regulations" are vague and, in some cases, inconsistent with previous Commission directions. Some of the language in the additional "applicable regulations" is so vague that it borders on the incomprehensible. For example:

- Section 5(c)(8) requires design features to ensure that environmental conditions during severe accidents do not exceed containment limits for a time "sufficient to mitigate them in view of their probability of occurrence and the uncertainties in severe accident progression and phenomenology." This provision is so vague that it could mean almost anything. Additionally, it is completely subjective and provides no meaningful criteria for what is acceptable.

- Section 5(c)(13) states that the standard design must include an assessment of "features that mitigate vulnerabilities resulting from other design features." This provision is so vague that it, too, could mean almost anything. Like Section 5(c)(8), it provides no meaningful criteria for what is acceptable.

- Sections 5(c)(6) and 5(c)(12) contain provisions that are more restrictive than those approved by the Commission in its Staff Requirements Memorandum (SRM) dated June 26, 1990, on SECY-90-016. In particular, Section 5(c)(6) does not include the Commission-approved allowance for "unique design layout" in judging the adequacy of fire protection features, and Section 5(c)(12) only allows for one of the two alternatives approved by the Commission concerning containment performance.

In short, despite all the attention given to "applicable regulations," there does not appear to be an appreciation on the part of the NRC staff of their possible ramifications. The additional "applicable regulations" continue to be problematic as is evident from their vague and subjective wording and the other, more fundamental concerns identified herein. a clear red flag with respect to the proposal to include them in the design certification rules.

E. The "applicable regulations" for operational issues should be deleted from the rule

In our comments on the proposed design certification rules, we noted that some of the additional "applicable regulations" pertained to operational issues and did not address the standard design, and requested that these requirements be deleted from the final rule. However, in the draft final rules, these additional "applicable regulations" were not deleted. Instead, they were transferred to Section 4 of the rule. Although our comments on these operational requirements are provided in more detail in Section III.D, we note here that these requirements should be deleted entirely from the final rule - - i.e., they are not appropriate as "applicable

regulations" in Section 5 of the rule, as "operational requirements" in Section 4 of the rule or as provisions in Tier 1 of the DCD. Furthermore, by moving these "applicable regulations" to Section 4, the NRC staff would exempt them from the backfit protections of Section 8(c).

F. The NRC staff proposal is contrary to the purpose of the design certifications and Commission policy guidance

In the Commission briefing of March 8, 1996, and again in a letter of July 2, 1996, to NEI President Joe F. Colvin, Chairman Jackson indicated the Commission's sensitivity to the historical record concerning applicable regulations, and the Commission's commitment to "pay particular attention to the positions and guidance previously enunciated by the Commission." For that reason, the industry has done a particularly thorough review of the history of the Commission's treatment of the applicable regulations issue, and we continue to believe the NRC staff's proposal is contrary to previous Commission policy guidance and intent with respect to the design certifications. Much of this history is reflected in the May 1, 1996, EPRI letter to NRC previously mentioned, as well as our August 4, 1995, and March 5 and May 31, 1996, submittals to the NRC. Additional historical information is provided below.

1. What was the Commission's original intent regarding "applicable regulations?"

Section 52.48, Standards for Review of Applications, specifies that design certification applications will be "reviewed for compliance with the standards set out in 10 CFR Part 20, Part 50 and its appendices, and Parts 73 and 100 as they apply to applications for construction permits and operating licenses for nuclear power plants, and as those standards are technically relevant ...." Additionally, Section 52.63 (a)(3) states that the NRC may not impose new requirements unless necessary "to secure compliance with the Commission's regulations applicable and in effect at the time the certification was issued, or to assure adequate protection of the public health and safety ..."

In addition, as noted in SECY-96-028, the Statements of Consideration accompanying Part 52 state that new safety standards may be required to address new design features and directed the staff to advise the Commission of the need for new criteria for judging the safety of designs offered for certification that are different or supplementary to current standards." However, we believe if one looks at the rest of the relevant excerpt from the Statements of Consideration, it is clear that the Commission did not have in mind the codification of new standards (i.e., "applicable regulations") within individual design certifications. Specifically, the Statements of Consideration continued:

> The Commission shall consider the NRC staff's views and determine whether additional rulemaking is needed or appropriate to resolve generic questions that are applicable to multiple designs. **The objective of such a rulemaking would be to incorporate any new standards in Part 50**

or Part 100, as appropriate, rather than develop such standards in the context of the review and approval of individual design certifications. On the other hand, new design features that are unique to a particular design would be addressed in the context of a rulemaking proceeding for that particular design (emphasis added).

The context for this SOC guidance was in response to the NRC staff proposal in SECY-89-036 that the design certification rules be the occasion for setting new standards for the advanced designs. Based on these SOC, the Commission clearly did not intend for the design certifications to serve this purpose. Indeed, the term "applicable regulations" was not in use when Part 52 was issued. Rather, it was coined later by the NRC staff in SECY-92-287. Moreover, the staff's full intent with respect to "applicable regulations" was not apparent until the staff responded to questions from Commissioner Curtiss via SECY-92-287A in March 1993.

Section 5(c) of the draft final design certification rules states, "in addition to the regulations specified in paragraph (a) of this section, the following regulations are applicable for purposes of 10 CFR 52.48, 52.54, 52.59 and 52.63:" Thus it appears that the NRC staff created the term and approach of "applicable regulations" as a legal artifice to elevate selected NRC positions to the status of NRC regulations "applicable and in effect" for the design certification rules. Part of the staff's stated purpose for doing so is to enable future backfits to these new "applicable regulations" to "reinstate the level of safety originally intended." To enable such backfits, the staff is effectively proposing to lessen the backfit protections established by the Commission in Section 52.63, as discussed above in Section IV.C.1.

We do not believe the Commission intended for NRC technical positions to be codified as "applicable regulations" via the design certification rules, nor do we believe the Commission intended that the NRC staff would dictate a lessening of the backfit protections that the Commission deliberately established in Section 52.63 - - and twice reaffirmed in SRMs on SECY-90-377 (February 1991) and SECY-92-287/287A (July 1993).

2. What was intended by the Commission guidance that technical and severe accident issues be resolved via design-specific rulemakings through the design certifications?

As noted in SECY-96-028, the Commission stated in their SRM on SECY-90-016, "where the staff proposed requirements depart from current regulations, consideration should be given to incorporating these requirements into the regulations." In their May 27, 1990, SRM following a staff briefing on SECY-90-016, the Commission requested a paper from the staff detailing the advantages and disadvantages of generic rulemaking to codify these new requirements in parallel with reviewing the specific designs. The staff provided this analysis in SECY-91-262 which concluded that generic rulemaking was not preferred. In their SRM of January 28, 1992, the Commission approved the staff recommendation "to proceed with design-specific rulemakings through individual design certifications to

resolve selected technical and severe accident issues for the ABWR and System 80+ designs."

In establishing NRC technical positions via SRMs on SECY-90-016 and SECY-93-087, tne Commission was clearly approving guidance for use in staff reviews of design certification applications. SECY-92-287 aptly describes the approach taken based on the Commission's guidance in their SRM on SECY-91-262:

> Since agency positions ..... were identified and incorporated into the designs during the staff's design review based on Commission guidance rather than specific regulations, the certification rule will approve the resolutions for the specific designs. These resolutions will be incorporated into the DCD by the applicant for design certification. The agency positions will be explicitly specified in the form of design-specific requirements in the NRC staff's FSER and any supplements thereto. The explicit documentation of these agency positions will provide a clear regulatory basis for these issues, as well as any additional issues that may be incorporated during the certification rulemaking.

Thus, it is clear that the Commission intended the resolutions of the NRC's positions to be codified in the DCD, not that the positions themselves be codified in the design certification rules.

For all the reasons and complications described in our written and oral comments to the Commission, and in light of the history on this issue and the purpose of design certification, we strongly disagree with the additional step proposed by the NRC staff of codifying these agency positions as "applicable regulations" in design certification rules. We do not believe that the Commission guidance in the noted SRMs, or other SRMs, provided approval, either explicitly or implicitly, for this additional step.

G. The NRC staff's latest proposal does not resolve the concerns associated with "applicable regulations"

We recognize that the NRC staff has included some wording changes in the draft final rules as well as protections against backfits to "applicable regulations" in an effort to reduce the additional licensing risk associated with the codification of new "applicable regulations." However, the staff's latest proposal does not succeed in resolving the industry's basic concerns, and, in any event, does not alter that "applicable regulations" are unnecessary for purposes of design certification and would represent (1) a source of inherent licensing uncertainty and instability -- contrary to a central objective of Part 52, and (2) a troubling new regulatory paradigm that is beyond the realm of adequate protection of public health and safety and for which the full implications cannot be foreseen. These effects may be and are being perceived by some in the utility industry, financial markets and the public as putting nuclear power at a competitive disadvantage relative to other forms of new baseload generation.

H. Conclusion

The proposed codification of agency technical positions as "applicable regulations" would create a new paradigm of regulations that goes well beyond what is necessary for adequate protection of the public health and safety. As discussed above and in various prior submittals to and briefings of the Commission, such codification is not necessary and would introduce substantial uncertainty in the Part 52 licensing process. We strongly urge the Commission to reject the proposal to include the proposed new "applicable regulations" in the design certification rules in any form (e.g., Section 5, Section 4, or the DCD). In making its policy determination on this matter, we further ask that the Commission specify that substantive reconsideration of the Final Safety Evaluation Reports[3], Design Control Documents, or other rule provisions is not required to compensate for the elimination of "applicable regulations" from the rules.

[3] It is recognized that a Commission decision to reject the staff's proposal to incorporate additional "applicable regulations" in the design certification rules will require specific editorial deletions to be made in the FSERs.

V. Application of the Section 50.59-like Change Process to Chapter 19 Information

A. Introduction

Plants licensed under Part 50 are required to have safety analysis reports (SARs) that include evaluations of design basis accidents (DBAs). However, SARs are not required to evaluate severe accidents and other conditions that are beyond the design basis. Pursuant to 10 CFR 50.59, plants licensed under Part 50 are allowed to make changes in their SARs without prior NRC approval unless such changes involve an unreviewed safety question (USQ). Under Section 50.59, a change constitutes a USQ if it causes an increase in probability or consequences of an accident evaluated in the SAR.

Unlike SARs for Part 50 plants, the DCDs for the ABWR and System 80+ contain evaluations of severe accidents and other conditions that are beyond the design basis. These evaluations are contained in Chapter 19 of Tier 2 of the DCDs. Section 8(b)(5) in the proposed rules identified a change process with respect to Chapter 19 that is similar to the change process in 10 CFR 50.59, i.e., any increase in the probability or consequences of an accident evaluated in Chapter 19 was defined as a USQ. Section 8(b)(5)(iii) of the proposed rules contained only one narrow exception – it stated that changes involving the deterministic severe accident evaluations in Section 19E (and associated appendices) of Tier 2 for the ABWR and in Section 19.11 (and associated appendices) of Tier 2 for the
System 80+ would constitute a USQ only if there is a "substantial increase" in the probability or consequences of the severe accidents evaluated in those sections.

In our August 1995 comments on the proposed rules, we made the following recommendations concerning Section 8(b)(5):

- It is inappropriate to apply the "50.59-like" change process to all of the evaluations in Chapter 19. Rather, the change process with respect to severe accidents should consider only the important features discussed in Section 19.8 for the ABWR and Section 19.15 for the System 80+. (See NEI's NOPR Comments, pp. 67-75.)

- If the Commission rejects the first recommendation, the industry recommended that, at a minimum, the severe accident change process, including appropriate criteria for determining unreviewed safety questions, be applied to all of Chapter 19, not just those evaluations in Section 19E for the ABWR and Section 19.11 for the System 80+. (See NEI's NOPR Comments, pp. 76-78)

The Statement of Considerations for the draft final rules explicitly rejected the industry's primary recommendation to provide an appropriate scope for the consideration of Chapter 19 information in the 50.59-like process. In addition, the Statement of Considerations ignored our comment concerning the appropriate criteria for determining USQs. Rather, the draft final rules apply the Section 8(b)(5)(iii) USQ criteria to Section 19E for the ABWR and 19.11 for the System 80+, and the Section 8(b)(5)(ii) USQ criteria to the rest of Tier 2, including the remainder of Chapter 19.

The industry continues to believe that the draft final rules' provisions concerning the scope and criteria for application of the 50.59-like process to Chapter 19 information are inappropriate. As discussed in our August 1995 comments (Attachment B, pp. 67-75), it is inappropriate to apply the "50.59-like" change process to all of the evaluations in Chapter 19. Rather, we continue to believe the change process with respect to severe accidents should be focused on the important features discussed in Section 19.8 for the ABWR and Section 19.15 for the System 80+. These sections contain the more significant insights, design features, and other results from the probabilistic and deterministic analyses of Chapter 19 concerning beyond design basis accidents and conditions. We recognize that the NRC staff has expressed reservations about restricting the scope of Chapter 19 consideration to a single section of that chapter. If the Commission does not adopt the industry recommendation to provide a focus for the "50.59-like" process on the more important features and evaluations within Chapter 19, the Commission should apply the criteria in Section 8(b)(5)(iii) to all of Chapter 19, as discussed below.

B. If the Commission decides not to restrict application of the 50.59-like process to Section 19.8 for the ABWR or Section 19.15 for the System 80+, then the Commission should apply the criteria of Section 8(b)(5)(iii) to all of Chapter 19.

1. In addition to Section 19E for the ABWR and Section 19.11 for the System 80+, the other sections in Chapter 19 contain evaluations of severe accidents and other beyond-design basis conditions

The staff has previously stated that it desires to apply Section 8(b)(5)(iii) of the rule to only Section 19E for the ABWR and Section 19.11 for the System 80+ because, according to the staff, these are the only sections in Chapter 19 that contain evaluations of severe accidents. However, the staff's characterization of Chapter 19 is in error. The whole of Chapter 19 evaluates severe accidents and other conditions that are beyond the design basis. For example, with respect to Chapter 19 of Tier 2 for the ABWR:

- Section 19F discusses the containment's ultimate strength, i.e., its ability to withstand events beyond the design basis.
- Sections 19H and 19I provide seismic capacity analyses and seismic margins analyses, i.e., the ability of components to withstand seismic events that are more severe than the safe shutdown earthquake.
- Sections 19L and 19Q contain shutdown risk evaluations and assessments.
- Section 19M contains probabilistic risk assessments for fire protection
- Section 19R contains probabilistic risk assessments for flooding.

None of these sections contains evaluations of DBAs, and none of the evaluations in these sections are similar to those contained in SARs for Part 50 plants and subject to Section 50.59. In fact, SARs for Part 50 plants do not even contain a Chapter 19. Given that Chapter 19 does not contain evaluations of DBAs, it should not be subject to the same change process that is applicable to DBAs. Instead, the severe accident change process proposed by Section 8(b)(5)(iii) of the draft final rules should be applied for all Chapter 19-related changes considered under the "50.59-like" process.

The staff stated in the public meeting on December 4, 1995, that it is not necessary to apply Section 8(b)(5)(iii) to all of Chapter 19, because numerical probabilities have been removed from this chapter. However, the absence of such probabilities does not, in and of itself, resolve the industry's concerns. In particular, a licensee is not relieved of the obligation of performing a safety evaluation of a change involving a Chapter 19 accident evaluation merely because the evaluation does not identify a probability for the accident. For example, the evaluations of DBAs in Chapters 6 and 15 for Part 50 plants do not contain numerical probabilities, yet Part 50 licensees are routinely required to determine whether a change involving such accidents would result in an increase in the probability of the accident. Similarly, even though numerical probabilities have been removed from the beyond-design basis evaluations in Chapter 19, applicants and licensees would still be required under the staff's proposal to evaluate whether there has been any increase in the probability of these accidents.

The staff stated in the public meeting on May 2, 1996, that Section 8(b)(5)(iii) should not apply to all of Chapter 19 because only the severe accident evaluations in Section 19E for the ABWR and Section 19.11 for the System 80+ are subject to substantial uncertainties. (Tr. 23-23, 27.) It should be noted that, in general, all Chapter 19 evaluations, not just those in the Sections cited by the staff, are subject to substantial uncertainties reflecting the "best estimate" analytical methodologies applied to beyond-design basis evaluations.

However, the primary reason it is appropriate to apply different change process criteria for severe accidents is not the uncertainties associated with severe accidents. Rather, it is due to the fact that small increases in the probability or consequences of severe accidents or other beyond-design basis conditions evaluated in Chapter 19 would not impact the NRC's findings regarding the safety of the standard design. It is primarily for this reason that all "50.59-like" safety evaluations concerning Chapter 19 information should be subject to the "substantial increase" standard.

2. The staff's proposal would impose undue burdens on both the industry and the NRC with no corresponding safety benefit

If a change involves a USQ, the applicant or licensee must seek prior NRC approval for the change, and the change must be the subject of an opportunity for public hearing. These requirements impose substantial burdens on both the NRC and the industry. Such burdens should be imposed only for changes that truly affect safety. However, under proposed Section 8(b)(5)(ii), prior NRC approval and opportunity for hearings would be required for changes in Chapter 19 that have no effect on safety. This is because Chapter 19 evaluates accidents that have an extremely low probability of occurrence, and using the criteria of Section 8(b)(5)(ii) as proposed by the staff, any increase in these small probabilities would constitute a USQ and therefore would require prior NRC approval and an opportunity for hearing.

For example, Section 19R.5.3 of Tier 2 of the DCD for the ABWR contains a probabilistic risk assessment of a flood originating in the Turbine Building and its impact on core damage frequency. As this evaluation indicates, if the truck entrance door for the Turbine Building does not leak and relieve the flood waters, and if a number of other highly improbable events beyond the design basis were to occur, there is a risk of core damage. However, as discussed in Section 19R.5.3 of the Standard Safety Analysis Report (SSAR) for the ABWR, the probability of core damage from a flood in the Turbine Building is minuscule, i.e., on the order of 10^{-9} per year. If a licensee were to change its Turbine Building truck door and purchase a stronger door that allowed less or zero leakage, this core damage frequency would increase by about 10%. Such an increase would be trivial and would not affect any conclusions in either the DCD or the FSER. Nevertheless, under the staff's proposal, this increase would constitute a USQ and require prior NRC approval and an opportunity for public hearing. This example demonstrates that the staff's position is burdensome and has no compensating benefits to safety.

Chapter 19 contains numerous other examples of evaluations of extremely low probability events. There is no benefit to safety, and great burdens on the industry and NRC, in defining small increases in the probability or consequences of these events as unreviewed safety questions. To prevent such a result, the Commission should modify Section 8(b)(5) of the rules so that the USQ criteria of Section 8(b)(5)(iii) apply to all of Chapter 19.

C. The draft final rules are inconsistent with the resolution of this issue proposed by NRC senior management

On several occasions, the industry has expressed these same concerns to senior NRC management. In November 1994, NRC senior management proposed rule language that addressed the industry concern about the need for special change process criteria for "50.59-like" safety evaluations concerning Chapter 19 information. However, neither last year's proposed rules, nor the current draft final rules, has reflected the common understandings that were reached in this regard between the industry and NRC senior management.

For example, in a meeting with the Director of the Office of Nuclear Reactor Regulation (NRR), Bill Russell, on November 2, 1994, General Electric representatives stated that the evaluations in Chapter 19 of Tier 2 should not be subject to the change process applicable to DBAs, because it would result in minor increases in the probabilities of beyond-design basis accidents evaluated in Chapter 19 being classified as USQs. Mr. Russell agreed, and directed that a change involving Chapter 19 be classified as an USQ only if there is a "substantial increase" in probability or consequences of the accidents evaluated in Chapter 19. As a result of this direction, the following provision was included in Section 3.8 of the DCD Introduction for the ABWR (Emphasis added):

> Various deterministic and probabilistic evaluations of severe accidents for the ABWR standard design are included in Chapter 19 of Tier 2. With respect to these evaluations only, a proposed change, test, or experiment shall be deemed to involve an unreviewed safety question if, as a result of the change:
>
> (a) there is a substantial increase in the probability of a severe accident evaluated in Chapter 19 such that a particular severe accident previously reviewed and determined to be not credible could become credible, or
>
> (b) there is a substantial increase in the consequences to the public of a severe accident previously evaluated in Chapter 19.

When the proposed design certification rules did not incorporate this approved language, the industry again raised concerns in its written comments and at the NRC public meeting on December 4, 1995. At the meeting, Mr. Russell again concurred with the language that had been prepared for the DCD Introductions (Tr. pp. 111-112), and restated the intent to distinguish between application of the change process to classic DBAs versus applying it to information related to severe accidents in Chapter 19.

Despite the apparent common understanding dating from 1994 concerning the need for special change process criteria for Chapter 19 evaluations, most of Chapter 19 would not be governed by the "substantial increase" standard under proposed Section 8(b)(5) of the draft final rules.

D. NRC senior management proposal at the July 15, 1996, public meeting

During the July 15, 1996, public meeting, the industry once again expressed concerns regarding the application of the Section 8(b)(5)(ii) USQ criteria to the severe accident and beyond design basis information throughout Chapter 19. As before, the industry and Mr. Russell agreed in principle that the intent of the change process is to evaluate a change in terms of its effect on design basis information against the "any increase"

USQ criteria in Section 8(b)(5)(ii) while evaluating its affect on severe accident or beyond design basis accident information against the "substantial increase" USQ criteria in Section 8(b)(5)(iii). (Tr. pp. 83, 86-88).

In this respect, the point of contention has always been the staff's characterization of the information in Chapter 19. Specifically, some staff reviewers have previously asserted that Section 19E for the ABWR and Section 19.11 for the System 80+ are the only sections in Chapter 19 that contain evaluations of severe accidents and beyond design basis accidents. To the contrary, we agree with Mr. Russell that these sections do not contain a complete list of the severe accident and beyond design basis accident analyses contained in Chapter 19. (Tr. p. 85). Rather, in general, all Chapter 19 evaluations contain severe accident analyses and beyond design basis accident analyses. Thus, application of the Section 8(b)(5)(ii) criteria to these other Chapter 19 analyses is inconsistent with the intent of the NRC and the industry in creating a special standard for evaluating changes in severe accidents and other beyond design basis conditions.

Based on the above considerations, the industry in its comments has requested the Commission not to apply the Section 8(b)(5)(ii) USQ (any increase) criteria to Chapter 19. Rather, consistent with the intent of the change process, the industry has urged the Commission to apply the Section 8(b)(5)(iii) USQ (substantial increase) criteria to all of Chapter 19.

During the public meeting, Mr. Russell and Mr. Malsch appeared to accept the industry position (Tr. pp. 83-85) but expressed that there might be design basis information in Chapter 19, and that it would be inappropriate to apply the Section 8(b)(5)(iii) heightened standard "to something that's within the design basis that just happens to be discussed in Chapter 19." As discussed below, because of the way the DCD is structured, the industry's proposal to apply the Section 8(b)(5)(iii) criteria to all of Chapter 19 would not cause such a result.

First, a proposed change would be evaluated against both design basis and beyond design basis accident analyses. Chapter 19 was specifically developed as a repository for severe accident and beyond design basis accident evaluations. Thus while Chapter 19 may include information that is also included in other chapters of the DCD, this "design basis" information was included in Chapter 19 as background to support the severe accident and beyond design basis accident analyses, not to document the design basis of plant structures systems and components. Thus the actual "design basis" information for these structures, systems and components is contained in other chapters of the DCD. For example, Chapter 19 contains analyses of beyond design basis floods and fires. However, the "design basis" analyses for floods and fires are contained in Chapters 3 and 9. Therefore, under the industry's proposal to apply the Section 8(b)(5)(iii) (substantial increase) USQ standard to all of Chapter 19, the effect of a proposed change on the design basis analyses, such as the fire or flooding accident analyses in Chapters 3 and 9, would still be evaluated using the traditional standard embodied in Section 8(b)(5)(ii). As a separate matter, its effect on severe accident or beyond design basis accident information (Chapter 19) would be evaluated against the "substantial increase" USQ criteria in Section 8(b)(5)(iii).

E. Conclusion

As currently written, Section 8(b)(5)(iii) of the rule would require wasteful evaluation of Chapter 19 information that is of little or no safety significance and would result in USQs being identified based on trivial increases in the probability or consequences of the accidents evaluated in Chapter 19. This result is inappropriate, would impose undue burdens on the NRC and licensees, and is contrary to previous agreements reached with senior NRC management. Accordingly, and consistent with the intent of NRC senior management expressed at the public meeting of July 15, 1996, we recommended the Commission adopt the approach described above. Suggested wording to accomplish this result is provided in Table 4.

TABLE 4

SUGGESTED RULE LANGUAGE ON CHAPTER 19 CONSIDERATION IN THE 50.59-LIKE CHANGE PROCESS

Section 8(b)(5)(ii) A proposed departure from Tier 2, except as to its effect on the resolution of a severe accident or beyond design basis accident issue identified in Chapter 19 of the plant-specific DCD, shall be deemed to involve an unreviewed safety question if:

(A) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the plant-specific DCD may be increased;

(B) A possibility for an accident or malfunction of a different type than any evaluated previously in the plant-specific DCD may be created; or

(C) The margin of safety as defined in the basis for any technical specification is reduced.

Section 8(b)(5)(iii) A proposed departure from Tier 2 affecting resolution of a severe accident or beyond design basis accident issue identified in Chapter 19 of the plant-specific DCD involves an unreviewed safety question if:

(A) There is a substantial increase in the probability of a severe accident or beyond design basis accident such that a particular severe accident or beyond design basis accident previously reviewed and determined to be not credible could become credible; or

(B) There is a substantial increase in the consequences to the public of a particular severe accident or beyond design basis accident previously reviewed.

VI. The Rules Should Incorporate All Substantive Provisions of the DCD Introduction

A. Introduction

In responding to the Notice of Proposed Rulemakings on the design certifications for ABWR and System 80+, the industry recommended that each of the substantive provisions contained in the DCD Introductions should be incorporated into the design certification rules, and without modification.

The industry's position was based on the fact that in 1994 both the NRR and OGC staff had approved the text of the DCD Introductions word-for-word, that the contents of the DCD Introductions were essential for implementation of the rules, and that inconsistencies between the Statements of Consideration and the DCD Introductions would lead to confusion and uncertainty, detracting from the goals of Part 52.

In SECY 96-077, the staff agreed with industry that the substantive provisions of the DCD Introductions should be incorporated into the final rules, stating at p. 37 that the staff's draft final rule:

> has adopted NEI's ... suggestion of incorporating substantive procedural and administrative requirements [from the DCD Introductions] into the design certification rule; and
>
> It is the Commission's view that the substantive procedural and administrative provisions described in the DCD Introduction should be included in, and be an integrated part of, the design certification rule which is published in the Federal Register and codified in the Code of Federal Regulations.
>
> Sections 2, 4, 6, 8, and 10 [of the proposed final rule] have been revised and Section 9 of this Appendix was created to adopt appropriate provisions from the DCD Introduction.

Nevertheless, NRC staff incorporation of DCD Introduction provisions was not done without modification. The NRC staff stated in the Statements of Consideration for the draft final rules:

> In some cases, the wording of these provisions has been modified to conform with the final design certification rule.

In other cases, the staff omitted substantive provisions in their entirety from the rules. For the reasons discussed below, the industry urges the Commission to incorporate all of the substantive provisions from the DCD Introduction into the final rule, using the language in the DCD Introduction previously approved by the NRC staff in 1994.

B. The NRC staff's incorporation of substantive provisions was incomplete

Although the SOC for the draft final rules state that the substantive provisions of the DCD Introductions should be incorporated into the final rules, there are at least six instances where such incorporation was not accomplished. Specifically:

1. The definition of Tier 1 material excludes a provision from the DCD Introductions stating that "the design descriptions, interface requirements, and site parameters are derived from Tier 2 information."

2. The definitions of Tier 1 material and Tier 2 material exclude statements from the DCD Introductions that "compliance with the more detailed Tier 2 material provides a sufficient method, but not the only acceptable method, for complying with the more general provisions in Tier 1." Also excluded is a statement that "compliance with Tier 2 is a sufficient, but not necessarily the only, method for complying with the ITAAC."

3. The definition of Tier 2 material excludes a statement from the DCD Introductions that COL Information Items do not establish requirements, rather, they identify an acceptable set of information, but not the only acceptable set of information, for inclusion in a plant-specific SAR. An applicant may deviate from or omit these COL Information Items; provided, however, that the deviation or omission is identified and justified in the plant-specific SAR. Further, the DCD Introductions specify that, "after issuance of a construction permit or license, the COL Information Items have no further effect to that licensee; instead the corresponding provisions in the plant-specific SAR are applicable."

4. The definition of Tier 2 material excludes a statement from the DCD Introductions that references to the standard safety analysis report "shall not be construed as incorporating these actions, or the information therein, in Tier 2."

5. The definition of Tier 1 material excludes a DCD Introduction provision that design activities outside the scope of the standard design may be performed using site-specific design parameters.

6. The draft final rule language on ITAAC excludes a provision from the DCD Introductions that "after NRC has issued its finding in accordance with 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion in the DCD, constitute requirements for the COL holder or for renewals of the COL."

Each of these specific instances was discussed with staff at the May 2, 1996, public meeting on the proposed final rules and is further discussed below.

Omission No. 1. With reference to No. 1 above, the staff took the position that "we felt [the omitted provision] wasn't necessary for the rule. That goes without saying." (Tr. at p. 83.) The industry asked if there was a reason why the omitted statement

could not go into the rule. Mr. Malsch of OGC responded, "It doesn't make any difference to me." (Tr. at 83-84.)

We believe that the omitted statement is important and should be included in the rule language. The statement that design descriptions, interface requirements, and site parameters are derived from Tier 2 information – although perhaps obvious to those who have been deeply immersed in design certification activities for the past several years – may not be obvious to future litigants challenging NRC's or a COL applicant's or holder's interpretation of or compliance with Tier 1 provisions. Having such a statement in the rule affords a COL applicant or license holder the opportunity to base Tier 1 compliance on substantially more detailed corresponding Tier 2 information. The fact that the omitted statement is "not necessary" does not make it undesirable to the industry and to future NRC staff. Since no legal objection has been raised to inclusion of this desired and agreed-upon text in the rule, industry requests that the Commission include the omitted text in the final rules.

Omission No. 2. Again, the staff explained that the omission was made because the two provisions in question (i.e., that Tier 2 compliance provides a sufficient, but not necessarily the only acceptable, method of compliance with Tier 1 and ITAAC) were "not necessary." (Tr. at 84.) Mr. Malsch of OGC expressed an additional concern that saying Tier 2 was "sufficient but not necessary" could lead to an implication that Tier 1 could be referenced without also referencing Tier 2. (Tr. at 84-85.) Mr. Malsch stated that "we didn't want to render the whole change process inapplicable by that language standing by itself." Id.

In subsequent discussion between Mr. Malsch and the industry, it appeared that the omitted text could be reworded to preserve the concept that, although Tier 2 must be referenced when referencing Tier 1, Tier 2 may be changed using the applicable change process and still produce compliance with corresponding provisions in Tier 1. Specifically, Mr. Malsch stated that OGC would reexamine the wording of the omitted text and consider whether a revised provision could be included in the rule. (Tr. at 86-87.)

We suggest that the following reworded provision be included in the final rule's definition of Tier 1 material:

> Compliance with the more detailed Tier 2 material provides a sufficient, but not the only acceptable, method for complying with the more general provisions in Tier 1 (including the ITAAC). Compliance methods differing from Tier 2 material must satisfy the change process provisions specified in Section 8(b), and such differences shall not negate a COL applicant's or holder's general requirement to reference Tier 2 when referencing Tier 1.

Omission No. 3. The DCD Introduction's provision that the COL Information Items do not constitute requirements and that, after issuance of a construction permit or COL, the COL Information Items have no further effect, was again explained by staff as being "unnecessary" given the draft final rule's explanation that COL License Items were informational requirements only. (Tr. at 87.) The industry explained that deletion of the DCD Introduction's provision could be construed, notwithstanding explanations in the SOC, as meaning that a COL applicant must submit to NRC all the information identified as COL Information Items despite an agreement with staff more than a year ago that such information was not necessarily required in all cases to be submitted to NRC. (Tr. at 87-91.) Hence, industry reiterated its desire that the omitted text be included in the rules. The staff maintained that its position had not in fact changed, but that, given the explanation in the SOC, the omitted text was unnecessary for inclusion in the final rule. (Tr. at 90-91.) Mr. Mizuno of OGC voiced an additional concern that the DCD Introduction's phrase, "instead, the corresponding provisions in the plant-specific SAR are applicable," does not appear to follow from the preceding phrase concerning COL License Information items. (Tr. at 88-89.)

To address the concerns expressed by the industry, we propose that the provision from the DCD Introduction on COL Information Items be added to the design certification rules. To address Mr. Mizuno's concern, the industry would have no objection if the last sentence of this provision were modified to state as follows:

> After issuance of a construction permit or COL, the COL Information Items are not requirements for the COL holder unless such items are restated in the plant-specific SAR.

Omission No. 4. Staff omitted a DCD Introduction provision stating that secondary references to the SSARs should not be construed as incorporating SSAR material into the DCD. At the May 2, 1996, public meeting, staff explained that it believed this provision was confusing in light of the explanation in the SOC that secondary references were requirements if their context so suggested. (Tr. at 91-96.) The industry responded that SSAR references were in fact a special category of secondary references that, in many cases, were intended simply to conform the format and sections of the DCD with the SSAR. (Tr. at 94.) The applicants were requested by staff to go back to their DCDs to review SSAR references to identify more precisely their context. (Tr. at 96.) That review has been completed and, based on such review, it is industry's belief that a rule provision clarifying that SSAR references are not intended to be incorporated by reference -- unless otherwise specifically provided in the rule, i.e., references to proprietary and safeguards information, which the context indicates are to be treated as requirements -- would be helpful to future applicants and would avoid unnecessary confusion. Therefore, we strongly urge the Commission to incorporate the omitted text in the rules. In the alternative, references to the SSAR other than to proprietary and safeguards information requirements should be deleted from the DCDs.

Omission No. 5. The NRC staff omitted from the definition of Tier 1 material a statement that design activities outside the scope of the standard design may be performed using site-specific (as opposed to standard, rule-imposed) parameters. Mr. Mizuno of OGC explained that the provision was omitted because it was "not necessary." (Tr. at 98.) He also expressed concern that if NRC does not have a technical basis for review of an activity, then the activity should not be addressed in the design certification. Id.

However, the industry remains concerned that there be no uncertainty that NRC may not, and has no intention to, regulate activities – using the design certification – that are in fact outside the scope of the standard design addressed by the certification. For example, a COL applicant should not be bound by the design certification in designing site-specific aspects of the ultimate heat sink.

Thus, we strongly urge the Commission to place in the rules the DCD Introduction provision identifying that activities outside the scope of the standard design may be performed using site-specific parameters.

Omission No. 6. The NRC staff omitted a key and previously agreed upon provision of the DCD Introduction stating that, after NRC's 10 CFR 52.103(g) finding, the ITAAC do not constitute requirements for the COL holder or for renewals of the COL. Staff's position at the May 2, 1996, public meeting was that this issue is adequately addressed in Section 9(b)(3) of the proposed final rules. (Tr. at pp. 98-100.) Mr. Mizuno of OGC nevertheless stated that he agreed with industry that indeed "ITAAC as a general matter do not constitute requirements on the COL holder." (Tr. at p. 100.)

However, industry pointed out that, in fact, Section 9(b)(3) differs significantly from the corresponding provision in the DCD Introductions. Section 9(b)(3) addresses only "subsequent plant modifications" and does not address other types of instances not related to "subsequent plant modifications" where ITAAC could potentially be construed as imposing requirements on a COL holder without a definitive statement to the contrary. (Tr. at 99-103.) In particular, industry cited specific examples of age-related (but appropriate) noncompliance (see Tr. at 102-103.), enforcement issues, and license amendments where, although no "modifications" occurred, a COL holder could under some circumstances be construed as being in noncompliance with an ITAAC.

To remove this potential, we strongly urge the Commission to adopt the language jointly agreed among the industry, NRR staff, and OGC staff in formulating the DCD Introductions, which is simply that ITAAC do not constitute regulatory requirements for COL holders or for renewals of a COL.

C. July 15 public meeting discussion

The subject of incorporation of the DCD Introduction was again raised by industry in the public meeting of July 15, 1996. Due to a lack of time, the individual omissions listed above were not each addressed. However, Mr. Malsch of NRC stated, in referring

to industry's comments on the omissions: "Yes, I thought some of your suggestions here were helpful and took care of some of the problems." (Tr. at p. 109.) Mr. Russell of NRC, in responding to the industry's specific comments on the omissions, stated, "if it doesn't conflict with the rule, and it's consistent with the process as we implemented it, then I don't have a problem with putting it in and giving it some specific words and look at those specific words and see whether that accommodates." (Tr. at p. 106.) In light of Mr. Malsch's and Mr. Russell's statements, the Commission should incorporate the omitted substantive DCD provisions into the final rule as requested.

On the particular DCD Introduction topic of the post-COL status of ITAAC, Mr. Russell appeared to agree with the industry's position that ITAAC should have no regulatory status upon receiving authorization to operate at full power. (Tr. pp. 106-109.) The one exception he noted is where a challenger had raised an ITAAC claim prior to fuel load, and such claim was still undergoing determinative proceedings at the time of full power operation. Mr. Russell emphasized that it was necessary to continue the regulatory status of the ITAAC after the Commission makes their Section 52.103(g) finding until completion of any administrative proceeding under 52.103(a). The industry agrees with this exception.

Although Mr. Russell characterized the ITAAC issue as one simply in need of "clarification," (Tr. at p. 108), the industry believes it is vital to incorporate the substantive understanding concerning ITAAC expiration into the body of the final rule. Therefore, Table 5 presents industry's proposal for incorporating this substantive provision into the rule, together with the exception noted by Mr. Russell.

D. Conclusion

The industry and NRC staff appear to agree on the fundamental premise that the substantive provisions of the DCD Introductions which previously were agreed to by the NRC (including OGC) staff should be incorporated into the body of the final design certification rules. In the few cases where such incorporation was not accomplished or was accomplished with modification, we have stated both a desire and a need for the original DCD Introduction provisions to be incorporated into the final rules. Where the staff raised legitimate concerns about the language of the DCD Introduction provisions that were not incorporated, we have responded to those concerns with proposed modifications of the language of the respective provisions. In the case of the status of ITAAC, after the Commission's Section 52.103(g) finding, the industry and NRC senior management appear to agree on the approach to resolving NRC's specific concerns.

Thus, this appears to be an area where NRR staff, OGC staff, and the industry seem to have reached common ground. We therefore continue to request that the substantive provisions of the DCD Introductions be incorporated into the body of the final design certification rules without modification, except as otherwise stated above (where modifications are appropriate to accommodate NRC staff concerns).

Table 5

SUGGESTED RULE LANGUAGE FOR SECTION 9(B)(3)

Section 9(b)(3) - After the Commission has made the finding required by 10 CFR 52.103(g), ITAAC no longer constitute regulatory requirements; provided, that as regards to specific ITAAC which are the subject of a Section 103(a) hearing, their expiration shall occur upon final Commission action in such proceeding. However, subsequent modifications must comply with Tier 1 and Tier 2 design descriptions in the plant-specific DCD unless the licensee has complied with the applicable requirements of Section 8 of this appendix.

VII. All Tier 2* Restrictions Should Expire at First Full Power

A. Introduction

Information designated Tier 2* in the DCDs may not be changed without prior NRC approval. For ABB-CE's System 80+ certified design, Section 8(b)(6)(ii) of the draft final rule includes the following four matters under Tier 2* for a holder of a combined license:

- Equipment seismic qualification methods;
- Piping design acceptance criteria;
- Fuel burn-up limit; and
- Control room human factors performance.

For GE's ABWR certified design, Section 8(b)(6)(ii) of the draft final rule includes the following six matters under Tier 2* for the holder of a combined license:

- Equipment seismic qualification methods;
- Piping design acceptance criteria;
- Fuel burn-up limit;
- Fuel licensing acceptance criteria;
- Control rod licensing acceptance criteria; and
- Human factors engineering design and implementation process.

Unlike all other Tier 2* information that reverts to Tier 2 after first full power, NRC staff would extend the Tier 2* change restrictions for these matters throughout the life of the plant. The Tier 2* concept represents an accommodation between the industry and the NRC staff that facilitated completion of design certification safety reviews. Nonetheless, it must be recognized that Tier 2* represents an unfortunate complication of the design certifications, albeit, perhaps, a necessary one. There is simply no need to extend the Tier 2* designation past first full power. Certainly, the staff has not provided adequate rationale for proposing to do so that justifies perpetuating for licensees the additional complexity in the Section 8 change process due to the presence of Tier 2* information in the DCDs. As described below, unbounded Tier 2* change restrictions are unnecessary and inappropriate, and Section 8(b)(6) should be modified for the final rules such that all Tier 2* restrictions expire at first full power.

Compounding the industry concern for Tier 2* restrictions that do not expire at first full power is the related NRC staff proposal that all Tier 2* changes would require license amendments and would be subject to hearing opportunity - - even if the change does not involve a USQ. As described in Section X.C of this attachment, the Commission should adopt final rule provisions that provide a hearing opportunity only for Tier 2* changes determined to involve a USQ.

B. The NRC staff's rationale for continuing Tier 2* change restrictions after first full power fails to explain the significance associated with the extension

In the industry comments on the notice of proposed rulemaking, it was noted that all Tier 2* change restrictions should expire at first full power and the Tier 2* information identified in the respective DCD Introduction should revert to the controls associated with Tier 2 information. The comment reasoned that the Tier 2* change restrictions pertained to detailed design methodologies for areas in which detailed design information was not developed for design certification (due to the lack of as-procured and as-built data or rapidly changing technology). However, by the time of first full power, the detailed design will have been fully developed in accordance with the Tier 2* provisions. Hence, the Tier 2* change restrictions will have served their purpose and should expire. This conclusion remains valid notwithstanding statements contained in SECY-96-077.

In SECY-96-077's proposed SOC, NRC staff provided its rationale for continuing the Tier 2* change restrictions after first full power:

> The NRC staff determined that some of the Tier 2* information could expire when the plant first achieves full (100%) power, after the finding required by 10 CFR 52.103(g), while other Tier 2* information must remain in effect throughout the life of the plant that references this rule. The determining factors were the Tier 1 information that would govern these areas after first full power and the NRC staff's judgment on whether prior approval was required before implementation of the change due to the significance of the information.

SECY-96-077, Att. 1, at 11 (ABWR), and Att. 5, at 11 (System 80+). However, for each of the items identified in the draft final rules as subject to the continued restrictions, the proposed SOC fail to adequately explain the significance of the item that warrants the extension of the Tier 2* restrictions.

1. Equipment seismic qualification methods

In the proposed SOC accompanying the draft final rules, the staff resolved the discrepancy between the Tier 2* expiration dates for the System 80+ and ABWR certified designs by imposing the change restrictions on both.

> One area of Tier 2* information that had different expiration dates was equipment seismic qualification methods. The NRC has determined that, due to its significance, changes to the qualification methodology must be approved before implementation. Therefore, the Tier 2* designation for this information will not expire for either design.

SECY-96-077, Att. 1, at 11 (ABWR), and Att. 5, at 11 (System 80+). NRC Staff offered no other explanation for its decision. Staff also provided no discussion of the significance of this issue.

2. Piping design acceptance criteria

The proposed SOC accompanying the draft final rules failed to address comments filed by ABB-CE regarding why the Tier 2* change restrictions for piping design acceptance criteria can expire at first full power. ABB-CE pointed out that significant design changes in this area are not expected in light of the efficiencies associated with maintaining and operating a standardized plant. Moreover, past experience reveals that even if such changes are identified, in all likelihood the change would present an unreviewed safety question for which prior NRC review and approval would be required anyway.

ABB-CE provided NRC with an example of how Tier 2* treatment of piping design acceptance criteria after first full power could preclude subsequent minor design changes.

3. Fuel burn-up limit

The proposed SOC accompanying the draft final rules summarize recent staff concerns regarding extended fuel burn-up in reactor cores at current generation nuclear plants. While recognizing that joint NRC-industry efforts are underway to better assess the performance of high burn-up fuel, the proposed SOC also note that there are no immediate safety issues and that there is no need for additional industry actions at this time. Where changes are requested to current generation technical specifications, prior NRC review and approval of the change is required anyway.

Unfortunately, the NRC staff appears poised to force an as-yet-undefined solution for its still-evolving concerns in this area on the design of evolutionary plants by maintaining the Tier 2* change restrictions after first full power for the fuel burn-up limit. As illustrated by staff's involvement in this area for current generation plants, there is no need to maintain the restriction in order to participate in future changes involving the fuel design of ABB-CE's System 80+ or GE's ABWR. The staff's involvement in approving changes to the technical specifications is the same for current generation plants as it is envisioned in this draft final rule for both advanced plants. The staff retains the ability to impose adequate protection backfits under Section 52.63 and Section 8 of the rules. Finally, the continuation of Tier 2* change restrictions for the fuel burn-up limit does nothing to identify staff's concern or the solution to the concern, but rather serves only to involve staff in the resolution of the issue -- which clearly is already occurring notwithstanding a Tier 2*-like restriction for current generation licensees. Therefore, staff has failed to articulate a significant reason for requiring the Tier 2* change restrictions to continue after first full power.

4. Control room human factors engineering and human factors engineering design and implementation

The proposed SOC accompanying the draft final rules failed to address comments filed by ABB-CE regarding why the Tier 2* change restrictions for control room human factors engineering can expire at first full power. In its comments on the notice of proposed rulemaking, ABB-CE explained how continuation of the restriction would impair licensing stability without an identifiable safety benefit. In addition, ABB-CE indicated by example how the restriction could actually impede design changes intended to improve plant safety and performance. With the protections available in Tier 2 and the normal inspection and enforcement process, as well as other motivations for maintaining a standard plant, it was also noted that sufficient controls on changes exist.

C. CONCLUSION

In sum, the NRC staff has failed to articulate a significant reason for continuing the Tier 2* change restrictions for equipment seismic qualification methods, piping design acceptance criteria, fuel burn-up limit, fuel licensing acceptance criteria, control rod licensing acceptance criteria, human factors engineering design and implementation process, and control room human factors engineering. In light of the fact that after first full power, control of changes to formerly Tier 2* information will be consistent with normal Tier 2 requirements, there is no need for Tier 2* restrictions to continue. Furthermore, the NRC staff proposal would unjustifiably perpetuate for licensees the additional complexity in the change process caused by Tier 2* material in the DCDs.

Combined with the related draft final rule provision requiring that all Tier 2* changes be subject to hearing opportunity even if no USQ is involved (as discussed in Section X.C of this attachment), unbounded Tier 2* restrictions represent an onerous, life-long burden on licensees. Accordingly, Section 8(b)(6) of the draft final rules should be modified as suggested in Table 6 such that all Tier 2* restrictions expire at first full power.

Table 6

SUGGESTED RULE LANGUAGE FOR SECTION 8(b)(6)

8(b)(6)(i) An applicant or holder of a combined license may not, before first full power, depart from Tier 2* information, which is designated with italicized text or brackets and an asterisk in the generic DCD, without NRC approval. After the plant first achieves full power, the Tier 2* designations expire and have no further effect as to that licensee. The departure will not be considered a resolved issue, within the meaning of Section 6 of this appendix and 10 CFR 52.63(a)(4).

(ii) A departure from Tier 2* information that does not involve an unreviewed safety question as defined in paragraph (b)(5) of this section does not require an exemption from this appendix.

VIII. NRC ITAAC Verification

A. Introduction

In a Commission briefing on March 8, 1996, the NRC staff stated their agreement with the industry view of ITAAC verification, as clarified in NEI's March 5 response to SECY-96-028. Specifically, there is agreement that in making its ITAAC determinations, it is appropriate for the NRC to consider QA/QC deficiencies that are relevant and material to determining that an ITAAC has been successfully completed. Based on this understanding, the staff stated their intent to add recommended language to the proposed design certification rules clarifying the nature of NRC ITAAC verification. We appreciate the staff's recognition of the importance of this issue and incorporation in the draft rules of appropriate ITAAC verification language. However, as discussed below, we believe certain statements in the Statements of Consideration (SOC) detract from the clarity and intent of the additional rule provision as a guide for future licensees and NRC staff, while other SOC discussion is beyond the scope of this issue and the design certification rules.

B. The Statements of Consideration be clarified to ensure they reinforce and focus on the ITAAC verification provision

The last paragraph of the SOC *Response* states, "the Commission concludes that information such as QA/QC deficiencies, which are relevant and material to ITAAC may be considered by the NRC in determining whether the ITAAC have been successfully completed." As stated above, we agree with this conclusion. Accordingly, we recommend deletion or modification of statements that are inconsistent with or obscure the important common understanding in this area. For example, we recommend the deletion of the following two sentences and deletion or modification of the third:

1. "The NRC disagrees with any assertion that QA/QC deficiencies have no relevance to [NRC ITAAC determinations]."

2. "To argue that consideration of underlying information that is relevant and material to determining whether ITAAC have been successfully completed ignores the history of ITAAC development."

3. "*Despite* this conclusion, the Commission has decided to add a provision to Section 9(b)...." (emphasis added)

In addition, we recommend the last sentence of the SOC *Response* be deleted and the next-to-last sentence be modified as follows: "This provision, which is fully consistent with 10 CFR 52.99 and 52.103(g), requires the NRC...." This change is appropriate for two reasons. First, the last sentence is confusing in that the staff does not, as indicated, describe in the SOC the manner in which the NRC intends to

implement 10 CFR 52.99 and 52.103(g), including the sign-as-you-go and pre-operational finding processes, associated *Federal Register* notices, etc. And second, the implementation of these Part 52, Subpart C, provisions is beyond the scope of the DCRs and the respective SOC.

C. Discussion of anticipated quality requirements for licensee ITAAC activities is not germane to NRC ITAAC verification and should be deleted from the SOC

The third paragraph of the SOC *Response* addressed quality requirements for ITAAC activities and contained the following sentence:

> Quality assurance deficiencies ... would be assessed for their impact on the performance of the ITAAC, based on their safety significance to the system.

In the May 2, 1996, public meeting on the draft rules, the NRC staff reiterated that QA/QC deficiencies that are relevant and material to determining that an ITAAC has been successfully completed could be considered by the NRC in making ITAAC determinations. The staff clarified (Tr. at p. 65) that the third paragraph of the SOC *Response* was not intended to suggest a third criterion (in addition to relevance and materiality) related to quality requirements or safety significance. Indeed, the question of whether a deficiency may be relevant and material to an ITAAC determination, and therefore considered in by the NRC in making ITAAC determinations, does not depend on whether the deficient licensee process/activity was safety-related (i.e., performed under Part 50, Appendix B, requirements). Therefore, the discussion of anticipated quality requirements for licensee ITAAC activities is not germane to the nature of NRC ITAAC verification. Accordingly, to avoid confusion on the basic point that only matters relevant and material to ITAAC determinations may be considered by the NRC, we recommend the third paragraph of the SOC *Response* be deleted.

D. SOC discussion of licensee documentation and submittals regarding ITAAC verification is beyond the scope of the certifications and should be deleted

We appreciate that the NRC staff recognizes the importance of the additional ITAAC implementation topics discussed under the SOC headings, "Licensee Documentation of ITAAC Verification," "NRC Inspection," and "Facility ITAAC Verification." And we appreciate the staff's openness in sharing their current thinking on these matters at the May 2 public meeting and in SECY-96-077. However, because these matters are beyond the scope of the certifications, were not raised in the proposed rules or formal comments thereon, and involve issues that have not been fully aired, we recommend discussion of these topics be deleted from the SOC.

Rather, we believe it would be more appropriate to ensure that current staff thinking on these ITAAC implementation topics is included in the staff's forthcoming draft paper on COL issues or another appropriate vehicle. We look forward to in-depth discussion with the NRC staff on ITAAC implementation and other COL issues, after design certification issues are resolved, and we believe the proposed additional rule provision on ITAAC verification will meaningfully expand the framework for these follow-on discussions. After appropriate interactions and preparation of one or more papers, we expect these discussions to lead to common understandings and appropriate Commission guidance.

E. Conclusion

As recognized at the March 8, 1995, Commission briefing and May 2 public meeting, there is no significant difference between the industry and NRC staff views on the nature of NRC ITAAC verification. As discussed above, we request that the Statements of Consideration be clarified to ensure they focus on and reinforce this important additional provision.

IX. Post-Design Certification Tier 2 Change Process

A. Introduction

In our August 1995 comments on the NOPRs, we proposed additional process provisions for the design certification rules to enable plant designers to incorporate qualifying generic Tier 2 changes into the standard designs via the "50.59-like" process during the multi-year period between the time of design certification and the first COL application. The changes that would be allowed under the industry proposal would not be safety-significant or adverse to the NRC staff's safety review of the design because each must first be determined not to involve an unreviewed safety question. However, such a process would be significant to the ability of prospective license applicants to complete the detailed design engineering and firm cost and schedule estimates for the plant. Thus the industry proposal is intended to enhance design and licensing certainty, consistent with objectives that are central to Part 52.

While NRC senior management expressed openness to later consideration of a post-design certification generic Tier 2 change process outside the context of the pending design certification rules, this openness is not reflected in the Statements of Consideration on the draft final rules. As discussed below, the SOC should be modified to reflect NRC openness to discuss a post-design certification change process and related issues after the design certification rules are completed.

B. A post-design certification Tier 2 change process holds significant benefits for the industry, the public, and the NRC

In our August 1995 comments and at the December 4, 1995, public meeting on the design certification rules, the industry identified several attributes and advantages of a post-design certification change process for generic Tier 2 changes. In particular, such a process would:

- enhance design/licensing certainty and early issue resolution, consistent with Part 52 objectives, by enabling generic changes to the Tier 2 design to be incorporated prior to a COL application, thus facilitating completion of detailed design engineering and firm cost and schedule estimates;

- enhance regulatory efficiency consistent with NRC and broader government initiatives by addressing generic changes to the Tier 2 design a single time, rather than repetitively with each license application with attendant potential for differing implementation;

- assure that timely and meaningful information is available to the public on intended changes to the approved design;

- reduce burden, complexity and uncertainty associated with the first COL application; and

- facilitate orderly, manageable and efficient processing and implementation of Tier 2 changes after design certification.

Also, while not necessary to assure a high degree of standardization among future plants referencing a given design certification, a post-design certification change process clearly furthers the Part 52 goal of standardization and is complementary to the strong industry commitment thereto.

C. The Statements of Consideration for the design certification rules should reflect the openness expressed in public meetings to future consideration of a post-design certification Tier 2 change process

At the December 4, 1995, public meeting on the proposed design certification rules, the NRC staff did not dispute the potential advantages of such a post-design certification generic change process and observed that the plant designers were best suited to performing the required safety evaluations for generic Tier 2 changes. However, NRC senior management noted that the industry proposal raised significant issues. These included the regulatory status of the plant designers and related NRC enforcement capability, public notice and participation concerning proposed changes to the design certification, and the resource burden on the NRC staff to evaluate proposed changes. (Tr. pp. 66-87.)

Citing these concerns, NRC senior management stated that consideration of this issue should be deferred for separate, later discussion outside the context of design certification. While we believe the concerns raised by the NRC staff can be addressed through appropriate additional provisions in the design certification rules, we recognize that the process proposed in our August 1995 comments may not be the only viable approach and that the design certification rules may not be the only vehicles for achieving the intended benefits.

However, we were surprised and disappointed that the SOC in SECY-96-077 did not reflect the openness to further discussion of a post-design certification change process that was expressed at the December 4, 1995, and July 15, 1996, public meetings. Instead, the SOC identify three existing mechanisms for addressing Tier 2 changes after design certification, none of which are adequate to achieve the intended objectives. The option of rulemaking to amend the design certifications is inoperative because it cannot be used to implement changes unless required to assure adequate protection or compliance with NRC regulations. The option to approve changes as part of the plant-specific COL application review fails to address the very concerns that have led to the proposal for a generic change process that could be used prior to the first COL application. And while the option of staff review and approval of topical reports on proposed Tier 2 changes would increase design/licensing certainty and is worthy of further discussion, it falls short of providing issue finality, and its practicality is put into question by the potential

resource limitations cited by staff. Further, preparation of topical reports and safety evaluation reports is unduly resource intensive, considering the necessarily low safety-significance of the design changes in question. Therefore, this approach would exacerbate the concern regarding the potential burden on NRC staff resources. A process is needed that provides for timely consideration under the "50.59-like" proce: proposed generic changes to the Tier 2 design. It is because of the inadequacy of the existing options that the industry seeks further dialogue with the NRC staff in this area.

Two additional possibilities were identified at the December 4 public meeting that were not mentioned in the SOC. The first was the potential for holders of a Final Design Approval (FDA) to use a "50.59-like" standard to make changes in their FDA. And the second was the potential that Part 52 and the DCRs could be amended to allow rulemaking to incorporate generic Tier 2 changes for reasons other than adequate protection or compliance. While these alternatives have their respective weaknesses, they too are worthy of further discussion with the NRC staff.

D. Conclusion

To enhance the level of design and licensing certainty necessary to support the decision to apply for a COL, a post-design certification change process is needed whereby generic Tier 2 changes identified as a result of detailed engineering work can be incorporated into the standard designs. Existing processes identified in SECY-96-077 are inadequate. There are significant benefits that would accrue to the industry, public, and the NRC through establishment of a post-design certification generic Tier 2 change process. At the very least, we request that the SOC for the final design certification rules reflect the view expressed by NRC senior management. Namely, that to the extent the industry considers the existing options for making post-design certification Tier 2 changes to be inadequate, the industry should come forward with specific proposals for discussion with the NRC staff after the design certifications are completed. We look forward discussing possible alternatives for establishing a post-design certification process and resolution of the concerns that have been expressed by the staff.

X. Additional Change Process Issues

A. Hearings on exemption requests by licensees

Section 8(b)(4) would require mandatory hearings on all exemption requests by a licensee, even if there is no request for a hearing from the public. As explained by NRC's deputy general counsel at the public meeting on May 2, 1996, that was not the staff's intent. (Tr. 36-38.) Instead, the staff intended that exemption requests by a licensee only be subject to an opportunity for a hearing, similar to license amendment requests under Part 50.

Therefore, Section 8(b)(4) should be modified to reflect the staff's intent, as follows:

> An applicant or licensee who references the design certification may request an exemption from Tier 2. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 50.12(a). ~~The granting of such an exemption must be subject to litigation in the same manner as other issues in the combined license hearing~~. Issuance of the exemption to a COL applicant must be subject to litigation during the combined license proceeding in the same manner as other issues material to that proceeding. Issuance of the exemption to a licensee must be subject to an opportunity for a hearing in the same manner as other license amendments.

B. Paragraph 2.B.3 of the Statements of Consideration should be clarified to state that plant specific changes will be implemented under Section 50.59 or Section 50.90, as appropriate

Paragraph 2.B.3 of the Statements of Consideration of the draft final design certification rules states that the Commission will develop a process for plant specific changes to design-related information made by the COL applicant or licensee, and that the Commission expects this process will be similar to the change process provided in Section 8(b)(5). Such a process is unnecessary. Plant specific changes by a COL applicant or licensee should be made in the same manner as such changes are made by current Part 50 licensees. Therefore, paragraph 2.B.3 of the Statements of Consideration should be modified to provide that plant specific changes by the applicant or licensee will be implemented under Section 50.59 or 50.90, as appropriate and subject to the backfit provisions of Section 50.109. To the extent that a plant specific change impacts a provision in the DCD such as an interface requirement, the design certification rules will govern the change, and no additional provision is needed.

C. **A hearing opportunity for Tier 2* changes is unnecessary and should be provided only if the change involves an unreviewed safety question (USQ)**

Section 8(b)(6)(ii) of the draft final rule states that a change to Tier 2* requires a license amendment, which in turn requires the opportunity for a public hearing. This process is overly burdensome and inappropriate for Tier 2* changes that do not involve a USQ. While the staff believes that the information in Tier 2* has higher safety significance than the other information in Tier 2, the information in Tier 2* will generally not rise to the level of significance of either Tier 1 or the technical specifications, and not all Tier 2* changes will involve a USQ.

Because Tier 2* changes that do not involve a USQ have little safety significance, and are by definition within the Commission's original safety finding, such changes should not give rise to an opportunity for a public hearing. With regard to the opportunity for hearing, such Tier 2* changes can and should be treated no differently from normal (non-USQ) Tier 2 information, changes to which are not subject to a hearing opportunity.

The industry concern regarding the automatic hearing opportunity for all Tier 2* changes regardless of safety significance is compounded by the related NRC staff proposal that Tier 2* requirements in several areas (specified in Section 8(b)(6)(ii) of the draft final rules) continue for the life of the plant. Section VII.A of this attachment discusses the industry recommendation that all Tier 2* restrictions expire at first full power.

For these reasons, including the compounding burden of unbounded Tier 2* restrictions discussed in Section VII.A above, we urge the Commission to modify the language in Section 8 to require prior NRC approval of Tier 2* changes, while restricting the need for a license amendment and an opportunity for a hearing to those Tier 2* changes involving unreviewed safety questions.

D. **To the extent the Commission does not adopt the recommendation that all Tier 2* restrictions expire at first full power, the Statements of Consideration should be modified to reflect the staff intent that Tier 2* material in the DCD may be superseded by information submitted with a license application or amendment**

In the public meeting of July 15, 1996, the NRC staff raised the possibility that a COL application or amendment request could contain information that would, in effect, supersede specified Tier 2* information and thus allow changes to be made to that information after first full power without prior NRC review and approval, i.e., consistent with Tier 2 requirements. (Tr. pp. 104-105.) We understand that, in essence, once information superseding Tier 2* material is approved by the NRC, the staff envisions that Tier 2* restrictions would expire for that information.

We appreciate this useful clarification and recommend that the Statements of Consideration be modified to reflect the staff's view. However, the appropriate resolution to the issue of unbounded Tier 2* restrictions is as described in Section VII of this attachment. Specifically, Tier 2* restrictions are not necessary after first full power, and therefore all Tier 2* restrictions should expire at that time. We note that this approach will allow licensees and the NRC to avoid the significant resource burden of the amendment process envisioned by the staff.