



NUCLEAR MANAGEMENT AND RESOURCES COUNCIL

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For use in
evaluating proposed
DC rules.
ANPR is also
attached.
c: Bob
Ron

William H. Rasin
Vice President & Director
Technical Division

December 30, 1993

Mr. Samuel J. Chilk
Secretary, Office of the
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Advance Notice of Proposed Rulemaking (ANPR)
"Rulemakings to Grant Standard Design Certification for
Evolutionary Light Water Reactor Designs" (58 *Federal
Register* 58664 - November 3, 1993)

Dear Mr. Chilk:

The Nuclear Management and Resources Council (NUMARC)¹, on behalf of the nuclear power industry, has reviewed the ANPR, "Rulemakings to Grant Standard Design Certification for Evolutionary Light Water Reactor Designs" and offers the following comments for consideration.

Notwithstanding the industry recommendations for changes provided in this response, we believe this ANPR provides a workable framework for developing the initial proposed design certification rules. Indeed, we find that areas of common understanding with the NRC staff far outnumber those where differences remain. Significant understandings have been developed on fundamental issues such as a two-tier rule structure and a design change process. Nevertheless, early Commission guidance is

¹NUMARC is the organization of the nuclear power industry that is responsible for coordinating the combined efforts of all utilities licensed by the NRC to construct or operate nuclear power plants, and of other nuclear industry organizations, in all matters involving generic regulatory policy issues and on the regulatory aspects of generic operational and technical issues affecting the nuclear power industry. Every utility responsible for constructing or operating a commercial nuclear power plant in the United States is a member of NUMARC. In addition, NUMARC's members include major architect/engineering firms and all of the major nuclear steam supply system vendors.

needed on the matters dealt with herein in order to facilitate timely commencement of rulemakings consistent with published design certification schedules.

The industry comments are provided in two attachments. Attachment A addresses the nine topics specifically identified in the ANPR. Attachment B addresses significant issues arising from Appendix 2 of the ANPR, Draft Proposed Standard Design Certification Rule. For ease of reference, previous industry submittals to the NRC that form the basis for these comments are also listed in Attachment B.

The industry previously provided, under NUMARC letter dated September 10, 1993, a draft-proposed rule for NRC staff consideration, which is listed as Reference 3 of Attachment B. The industry's draft-proposed rule contained many elements that were not reflected in the ANPR. For example, the industry's draft-proposed rule included proposed Statements of Consideration, addressed the conduct of a parallel Part 51 rulemaking on severe accident mitigation design alternatives (SAMDAs) under NEPA, and incorporated Commission guidance on design certification rulemaking proceedings. While the NRC staff's ANPR is appropriate for seeking public comment, we believe the comprehensive draft rule forwarded by the industry can be of value to the NRC staff and Commission in developing the initial proposed design certification rules.

There are three issues we believe are most significant relative to the form and content of design control documents (DCDs). Two of the issues arose from the NRC staff's preliminary guidance on DCD form and content (ANPR Reference 9) that was forwarded to each design certification applicant on August 26, 1993. The third issue comes from SECY-287/287A, Form and Content for a Design Certification Rule.

The first issue involves the treatment of secondary references in a design certification rule. This issue is of paramount importance to the industry due to the potentially significant adverse impact on design certification rule clarity and certainty, as well as on industry and NRC schedules and resources in both the near and long term. Item 1 of Attachment B includes a revision of the draft industry paper, "Incorporation by Reference in the Design Certification Rule," an earlier version of which was forwarded to the NRC staff in our letter dated December 6, 1993. A meeting is scheduled with the NRC staff on January 6, 1994, to discuss a practicable resolution of this critical issue. As a result of these discussions, the industry may supplement this ANPR response in the future.

The second issue concerns the extent and purpose of design PRA information to be documented in a DCD. We have forwarded to the NRC staff, via letter dated

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November 8, 1993, a draft industry paper titled, "Regulatory Significance of Information Contained in DCDs." As discussed in response to ANPR Topic 9 and that paper, we urge a return to the NRC staff position discussed at the November 23, 1992, briefing of the Commission. Contrary to the new position contained in the NRC staff's August 26, 1993, preliminary DCD guidance, the earlier staff position embodied the view shared by the industry that only severe accident insights, i.e., key design features as delineated in the PRA, are necessary for documentation in the DCD. We hope to meet shortly with the NRC staff to resolve this issue. If appropriate, we may supplement this ANPR response in the future.

The third issue relates to "applicable regulations." The industry recommendation and basis for our disagreement with the NRC staff proposal in this area was forwarded in our May 25, 1993, letter of comment to the Commission on SECY-92-287/287A, Form and Content for a Design Certification Rule. We continue to have fundamental differences with the NRC staff on this important issue and Commission consideration is requested on this matter as iterated in response to ANPR Topic 8.

Because of the continued uncertainty surrounding issues fundamental to proceeding with DCD preparation, we reaffirm our recommendation that the Commission issue guidance allowing for issuance of a Final Design Approval (FDA) prior to proposed DCD approval. By our comment letter to the Commission dated June 22, 1993, on SECY-93-097 (Integrated Schedules), we stated our reasons for concluding that FDA issuance need not, and should not, await DCD approval. While pertinent to a design certification rulemaking, resolution of the remaining issues regarding the formal content of a DCD is not expected to cause any change to the FDA-approved design.

We hope these comments on the subject ANPR will be helpful to the Commission in evaluating issues associated with design certification rule form and content. We look forward to early definitive Commission guidance. We will continue our interactions with the NRC staff toward resolution of the remaining issues and will supplement this response as appropriate. Timely issue resolution and Commission guidance are needed to support preparations for design certification rulemakings consistent with published NRC schedules. Additionally, we urge the Commission to provide guidance allowing for FDA issuance prior to DCD approval.

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The industry would be available to brief the Commission on any of these issues to facilitate its deliberations.

Sincerely,



William H. Rasin

WHR/RJB/
Enclosures

c: Chairman Ivan Selin
Commissioner Kenneth C. Rogers
Commissioner Forrest J. Remick
Commissioner E. Gail de Planque
James M. Taylor, Executive Director of Operations, NRC
Thomas E. Murley, Director, NRR

INDUSTRY COMMENTS ON NRC ANPR

**"Rulemaking to Grant Standard Design Certification
for Evolutionary LWR Designs"**

Identified ANPR Topics

**ANPR Topic 1: **Acceptability of a Two-Tiered Design Certification Rule
Structure****

A two-tier design certification rule structure was developed as a way to effectively implement 10 CFR Part 52. The Commission explicitly approved the two-tier rule structure in its February 15, 1991, Staff Requirements Memorandum (SRM) on SECY-90-377 as an implementation approach comporting with Part 52.

For the reasons outlined below, industry agrees with the NRC that a two-tier structure to a design certification rule is practical and fully consistent with the both the intent and requirements of Part 52. The ANPR reflects a two-tier rule structure and thus appropriately provides a basic framework for further consideration and development of specific design certification rules.

10 CFR 52.47(a)(1) requires an application for a design certification rule to include extensive information relating to plant design. In promulgating Part 52, the Commission declared that, while all of the information in the application would be subject to Commission review and approval, only the most important design features would comprise the "certified" design portion of the rule. In particular, the Commission stated in the Part 52 Statements of Consideration:

The Commission does expect, however, that there will be less detail in a certification than in an application for certification, and that a rule certifying a design is likely to encompass roughly the same design features that Section 50.59 prohibits changing without prior NRC approval. (54 Fed. Reg. 15372, 15377 1989)

Thus, in issuing Part 52, the Commission distinguished between the level of detail in the certified design and the level of detail in the application for the certified design. This difference in level of detail forms one of the bases for the two-tier structure -- a structure which formats that differentiation and documents with appropriate specificity the content of each tier.

To summarize, Tier 1 contains design descriptions, extracted from Standard Safety Analysis Report (SSAR) design information, documenting the most important and salient safety features of the design and associated inspections, tests, analyses and acceptance criteria (ITAAC). The scope and depth of Tier 1 (level of detail) will be directly related to the safety significance of each system that comprises the certified design. Tier 1 will also include site parameters for the certified design and interface requirements. The Tier 1 portion of the design is that which will be explicitly certified by design certification rulemaking.

Tier 2 contains the more detailed supporting information which, together with Tier 1, provides the basis for the NRC staff's overall safety determination and final design approval. Tier 2, as well as Tier 1, will comprise the design that will be evaluated and approved in the design certification rulemaking.

In addition to being fully compatible with Part 52, the two-tier approach is needed as a practical matter to implement Part 52. The two-tier approach promotes standardization, enhances issue resolution and assures workability. Standardization is furthered by clearly delineating in Tier 1 those aspects of the design, plus associated ITAAC, most significant to safe operation of the plant and subject to the most stringent Part 52 change controls. Standardization is also furthered by clearly defining the Tier 2 (uncertified) design and establishing clearly defined limitations against change.

Issue resolution is furthered by including both the certified and uncertified portions of the design (i.e., Tiers 1 and 2) within the scope of the rule. By doing so, matters within the scope of both tiers are resolved for purposes of Combined License (COL) issuance. Issue resolution is vital to prospective owner operators who will consider licensing and constructing nuclear plants under Part 52 relative to other forms of baseload generation. The breadth and finality of issue resolution through design certification promotes

predictability and stability in the licensing and regulatory processes that is essential to the support for ALWRs by the financial community as well as the electric utility industry.

The two-tier approach is necessary to facilitate the practical implementation and workability of Part 52 as applied to licensing and construction of an ALWR facility. In formulating Part 52, the Commission recognized the need to afford flexibility for making plant-specific design changes (e.g., to incorporate technological advancements). Accordingly, as noted below and discussed further in response to Topic 2, separate and graded change provisions are accommodated best through a two-tier structure.

As indicated, the change provisions in Part 52 embody a two-tier concept. Specifically, Section 52.63(b) provides that a design change by an applicant or licensee will be subject to different change criteria, depending upon whether the change in question pertains to the "certified" portion of the design or to the remainder of the design. Under Section 52.63(b)(1), changes from the "certified" (i.e., Tier 1) design can only be made by means of an amendment to the rule or the NRC granting an exemption. To accommodate as-procured and as-built practicalities, flexibility is allowed for Tier 2 changes. Thus, Section 52.63(b)(2) provides that a Section 50.59-like process is available to evaluate proposed plant-specific changes for the remaining aspects of the approved design (i.e., Tier 2). As the Commission noted in the Statements of Consideration for Part 52, "Section 50.59 will continue to apply to the uncertified portion" of the approved design. (54 Fed. Reg. 15372, 15377 (1989))

In summary, a two-tier structure is fully consistent with both the language in the Statements of Consideration for Part 52 and the provisions of Part 52 itself and is needed as a practical matter to facilitate successful implementation of Part 52.

**ANPR Topic 2: **Acceptability of the Process and Standards for
Changing Tier 2 Implementation****

The industry concurs in the process and standards for changing Tier 2 information as identified and discussed in 10 CFR 52.63 and Commission SRMs dated February 15, 1991, on SECY-90-377 and June 23, 1993, on SECY-92-287/287A.

In addition, we believe the industry and the NRC staff have a consistent view on the criteria that are part of the so called "Section 50.59-like" process to be used by COL applicants and holders for evaluating and implementing changes to Tier 2 information. Specifically, as indicated in the ANPR Section A.13(d)(3), Tier 2 changes can be made without prior Commission approval unless the proposed change involves a change to the Tier 1 information, Technical Specifications or raises an unreviewed safety question. The Commission guidance in the SRM dated February 15, 1991, affirmed the use of a process similar to 10 CFR 50.59 to afford the flexibility necessary to complete construction of an ALWR facility.

However, certain issues associated with implementation of the "Section 50.59-like" change process have been raised by this ANPR or references therein that are addressed elsewhere in this response. In particular, the industry does not agree with the statement in the ANPR Section A.13(d)(3) that changes properly implemented via the "Section 50.59-like" process cause a loss of finality relative to the affected portion of the design or are subject to subsequent legal challenge. Such changes would be specifically sanctioned by the design certification rule, and the only issue entertainable in a COL licensing proceeding is whether the 50.59-like process has been complied with -- not the merits of the subject change. This issue is addressed in Attachment B of this response.

Further, the industry does not agree with preliminary NRC staff guidance provided in ANPR Reference 9 relative to implementing safety evaluations under the "Section 50.59-like" process. We address this issue in our response to ANPR Topic 9, Design Control Document Form and Content, below. Two additional issues related to the Tier 2 change process, the proposal for a Tier 2 exemption and availability of the "Section 50.59-like" process to COL applicants, are addressed in response to ANPR Topics 3 and 4, respectively.

ANPR Topic 3: Acceptability of a Tier 2 Exemption

At the NRC's public workshop on design certification held on November 23, 1993, the NRC staff elaborated on its concept of a Tier 2 exemption process. As indicated in ANPR Section A.13(d)(2), we understand the NRC staff is proposing an exemption process equivalent to that of 10 CFR 50.12(a) that would be used to evaluate requested exemptions from Tier 2 information filed by COL applicants and licensees (i.e., in cases

where Section 50.59 evaluation determines that prior Commission approval of a change is required). The NRC staff notes that a process for seeking exemption from one or more elements of a design certification, including Tier 1 information, is provided by Section 52.63(b)(1). The NRC staff is recommending that a corresponding provision specifically relating to Tier 2 exemptions be included in ELWR design certification rules. Additionally, the NRC staff proposal would differentiate between the Tier 1 and Tier 2 change processes in that Commission consideration of the impact on safety due to a reduction in standardization would not be required in evaluating plant-specific Tier 2 exemption requests by a COL applicant or holder. Rather, Section 50.12(a) alone would apply to such changes.

The industry supports the above described proposal as consistent with the two-tier approach and change structure inherent in Part 52 as discussed in response to ANPR Topic 1.

The industry recommends the Commission approve the addition of a Tier 2 exemption process indicated by ANPR Section A.13(d)(2).

ANPR Topic 4: **Acceptability of Using a "Section 50.59-like" Change Process Prior to the Issuance of a Combined License that References a Certified Design**

The Commission expressly approved the NRC staff's recommendation in SECY-92-287/287A, supported by the ACRS, that a combined license applicant should be afforded the opportunity to utilize a "Section 50.59-like" process for making changes to Tier 2 information. While Part 52 and associated guidance provide for the use of the "Section 50.59-like" change process by licensees, the identification of the need for changes to Tier 2 information will likely begin prior to the application for a COL. For example, an applicant may identify the opportunity to incorporate improvements in technology through use of an edition of a code or standard that was released subsequent to design certification, but would be appropriate for inclusion in a COL application.

The industry supports extending the availability of the "Section 50.59-like" change process to COL applicants. The practical benefit of this approach is clear. If use of the "Section 50.59-like" change process were restricted to licensees, then changes, associated

reporting, and NRC reviews would have to be deferred until after the COL is issued. Thus, the opportunity to reflect such changes, as appropriate, in the COL would be lost. Extending the use of the "Section 50.59-like" change process to an applicant will provide necessary flexibility at the appropriate time in the licensing process and will result in a COL with more predictability and greater stability.

Because Part 52 is silent concerning Section 50.59 use by COL applicants, we believe such authorization would be a sound exercise of Commission policy discretion. In addition to including appropriate rule language, such as that discussed in ANPR Section A.13(d)(3), we recommend the Commission specify its intent in this regard in the Statements of Consideration accompanying the design certification rules.

ANPR Topic 5: **The Acceptability of Identifying Selected Technical Positions from the FSER as "Unreviewed Safety Questions" that Cannot Be Changed Under a "Section 50.59-Like" Change Process**

The NRC staff has proposed to pre-designate changes to certain design aspects as constituting "unreviewed safety questions." The proposal apparently stems from the NRC staff's conclusion that the COL applicant or COL holder should not be able to change certain selected Tier 2 information, considered by the NRC staff to be especially important, without NRC approval. These special designations would be made in design areas where it was either not practical to specify a high degree of design detail at the time of design certification, or where it was believed to be desirable to allow the design to accommodate subsequent improvements in technology (and, therefore, a high degree of design detail was deliberately not specified). In those selected areas, the NRC staff seeks to ensure that certain Tier 2 information, which the staff will designate, cannot be changed without prior NRC approval.

The industry believes it is not necessary to create an artificial set of "unreviewed safety questions" to accomplish the NRC staff's objective. The NRC staff's proposal, as articulated, is tantamount to the creation of a third tier of design information and thus runs counter to the two-tier rule structure discussed in response to ANPR Topic 1 and endorsed by the Commission in its SRM on SECY-90-377.

To address the NRC staff's underlying concerns, the industry proposes that Tier 2 material selected by the staff be designated, not broadly in the rule as proposed in Section A.13(d)(3), but specifically in the ELWR SSAR/FSER and DCD as that requiring staff notification prior to implementing changes under Section 50.59. Prior staff notification, similar to notifications incident to changing quality assurance programs or emergency response or security plans, would allow the NRC staff to make a determination on whether the proposed change would constitute an unreviewed safety question. The COL applicant or holder would, at that point, be constrained from proceeding with the change absent either staff concurrence or a successful appeal of the NRC staff's determination.

By not explicitly incorporating special restrictive Tier 2 designations into design certification rules, appropriate flexibility will be provided for future reevaluation of the need to continue special treatment of Tier 2 changes in identified areas. The industry envisions a time, subsequent to completion of designs and ITAAC, where any special change restrictions within Tier 2 will no longer be necessary. Satisfactory completion of ITAAC will likely demonstrate that areas of the design for which special change restrictions had been imposed have achieved the same, probably greater, level of detail as that which supported "up-front" safety determinations by the NRC staff in other design areas at design certification. Continued differentiation of the change process for selected aspects of the Tier 2 design should no longer be needed. Instead, the "Section 50.59-like" process would govern the evaluation and implementation of changes throughout all of the Tier 2 design and throughout the life of a plant built and operated based on that design.

The suspension of special Tier 2 designations subsequent to completing ITAAC is consistent with the approach taken in the core/fuel design area. In this area, extensive detailed interactions with the NRC staff have determined that (1) only changes to certain limited aspects of the core/fuel design would be subject to special Tier 2 restrictions; and (2) these special restrictions would apply only to the first fuel cycle core load. The latter determination reflected that NRC staff approval has historically been sought prior to making the types of core/fuel design changes in question. Thus, it was recognized that historical industrywide practice obviates the need beyond the first cycle to maintain special Tier 2 restrictions designated in the DCD.

Whether the Commission adopts the approach proposed by the NRC staff or the recommended industry alternative discussed above, any special predesignations by the NRC staff should be limited to the design areas discussed to date with plant designers.

Moreover, it is vital that these special designations be as narrow and specific as practicable to avoid the inadvertent broadening of this special category of Tier 2 design information and the excessive restrictions against change that would result. The examples of "unreviewed safety questions" given by ANPR Section A.13(d)(3)(i,ii), e.g., "fuel design," clearly are not sufficiently narrow and specific to avoid these consequences. The listing would need to correspond precisely to the specific design information for which changes will require NRC staff notification or Commission approval.¹

We reiterate that the industry-recommended alternative approach to predesignating "unreviewed safety questions" would be completely effective in addressing the NRC staff's underlying concerns and would avoid the redundancy and difficulties noted above associated with listing them in specific design certification rules.

We recommend the NRC adopt the alternative approach to designating "unreviewed safety questions" as described above.

ANPR Topic 6: **Need for Modification to Section 52.63(b)(2) if the Two-Tiered Structure for the Design Certification Rule is Approved**

As discussed in response to ANPR Topic 1, the industry views the two-tier structure for implementing the Part 52 rule to be inherent in Part 52 as the Commission promulgated the rule in 1989. As such, there is no need to modify Part 52 at this time. However, based on experience with the initial design certifications, some Part 52 changes may be identified as appropriate for future consideration.

As proposed by the NRC staff in this ANPR and at the November 23, 1993, public workshop, design change provisions based on Section 52.63, but clarified to implement the two-tier concept and relevant Commission guidance, would be incorporated into specific design certification rules. We believe such a step to be appropriate.

¹ In this regard, we assume that ANPR Section A.13(d)(3)(iii), "[O]ther identified unreviewed safety questions" was included in the ANPR for illustration purposes and is not intended to be included in proposed or final design certification rules. Clearly, given the importance of limiting the number and scope of such designations, inclusion of such an open-ended item would be inappropriate in an actual rule.

ANPR Topic 7: **Incorporation versus Identification of Tier 1 or Tier 2 Information, or Both, in the Combined License**

As acknowledged by the NRC staff at the public workshop on November 23, 1993, it is not imperative that this issue be resolved for design certification. Nonetheless, the industry has identified at least two options for future consideration in connection with the initial combined license proceeding.

One option would be that identified in SECY-92-287A in response to a Commission question raised in the earlier SECY-92-287. This option would "incorporate" Tier 1 of the design certification rule by reference into a COL while "identifying" Tier 2. Tier 2 would not be incorporated because, according to the NRC staff, doing so would require license amendments for licensee-initiated changes as is the case with Technical Specifications.

However, we note that a viable option would be to incorporate both tiers of information in the rule, provided that Tier 2 change provisions are incorporated in the rule as well.

We recommend the Commission defer decision on this issue because resolution is not required for design certification. Instead, options such as those noted above should be explored more fully in the context of developing guidance related to COL form and content. It is requested that the Commission provide explicit guidance to the NRC staff that resolution of this issue is not required to support NRC staff issuance of FSERs or FDAs.

ANPR Topic 8: **Acceptability of Using Design Specific Rulemakings Rather than Generic Rulemaking for the Technical Issues whose Resolution Exceeds Current Requirements (i.e., "Applicable Regulations")**

In SECY-92-287A, the NRC staff proposed to restate and designate technical and severe accident positions endorsed by the Commission as "applicable regulations" effective at the time of design certification issuance. We understand the purposes of the NRC staff proposal are to (1) ensure compliance with the NRC staff positions on these issues; (2) ensure enforceability of these agency positions at design certification and at

the time of any renewal thereof; and (3) provide legal bases for changes imposed by the Commission under Section 52.63(a)(1).

As indicated in Reference 2, the industry strongly disagrees with the NRC staff on this issue. There is no need to create within the design certification rule a free-standing collection of additional "applicable regulations." Commission approved NRC staff positions will be reflected in a design certification rule by means of design provisions contained in Tier 1 and Tier 2 of the DCD incorporated in the rule. Those provisions will govern issuance of the design certification rule, will constitute "applicable regulations" in considering subsequent compliance backfits pursuant to Section 52.63(a), and will comprise part of the regulatory basis for making design certification renewal determinations.

Far from providing benefits to the NRC, industry and public, as asserted by the NRC staff, formulating independently-stated "applicable regulations" to include in a certification, which is itself a rule, would generate needless duplication, complexity, and delay. After achieving agreement on the specifics of the design, the NRC staff's proposed approach would result in yet another round of extensive discussions to reach agreement on matters that have already been agreed to in detail, but now must be formulated in more "broadly stated" positions in a process equivalent to a series of complex, discrete rulemakings. The specific wording of those positions will likely be the subject of considerable controversy and review if those positions are to become free-standing "applicable regulations." Such debates present the prospect of further delays in certification schedules and a prolonging of the certification proceedings, even though there is agreement that the specifics of the design are acceptable.

Finally, these "broadly stated," free-standing, "applicable regulations" carry the potential for new and diverse interpretations by the NRC staff during the life of the design certification -- interpretations which may be at odds with the understandings that were translated into specific Tier 1/Tier 2 requirements in the DCD. The injection of this factor into the Part 52 process runs counter to the Part 52 objectives of standardization and establishment of a predictable, stable licensing process, both of which are needed to assure the economic viability of ALWRs.

On a related matter, we have read with interest the Commission's September 14, 1993, SRM on SECY-93-226, "Public Comments on 57FR44513 - Proposed Rule on

ALWR Severe Accident Performance." This reflects the Commission's decision to defer further consideration of generic severe accident rulemaking at least until after issuance of FSERs on the evolutionary ALWRs, completion of siting and source term related revisions to 10 CFR Parts 50 and 100, and further experience is gained with plant-specific design certification rulemakings.²

We note that there appear to be important parallels between the Commission's recent consideration of generic severe accident rulemaking and the present consideration of "applicable regulations." First, many of the "applicable regulations" sought by the NRC staff for incorporation in design certification rules relate to severe accident mitigation or prevention. The SRM on SECY-93-226 reflects the Commission conclusion that further severe accident regulations are not necessary for protecting the public health and safety. As observed by Commissioner Remick for this SRM, the design certification rulemakings themselves will serve the purpose of resolving ALWR severe accident issues at this time.

Moreover, we see little difference between the NRC staff proposal to incorporate "broadly stated," free standing, "applicable regulations" in design certification rules and the similar effect that would have resulted had the decision been made to proceed with generic severe accident rulemaking for ALWRs. The arguments made above and in Reference 2 in opposition to the "applicable regulations" proposal are similar to those made in the industry's December 22, 1992, response to the severe accident ANPR (Reference 6).

The industry strongly recommends that the Commission disapprove the NRC staff proposal regarding "applicable regulations." We believe such a decision is both necessary and consistent with the recent Commission decision to defer further consideration of generic severe accident rulemaking for ALWRs.

² In this regard, we agree with Commissioner Remick's additional comments on SECY-93-226, consistent with our December 22, 1992, response to the severe accident ANPR (Reference 6), that generic severe accident rulemaking is not needed and should not be considered while any of the four submitted ALWR designs have their design certifications pending.

ANPR Topic 9: **Appropriate Form and Content of a Design Control Document (DCD)**

Under the concept proposed by the NRC staff, a DCD would be developed for each ALWR as a repository for the respective design certification rule's design and ITAAC requirements. A DCD, as modified during the design certification rulemaking proceeding, will represent the codified standard design and will be the design document referenced in a COL application.

We believe there is common understanding with the NRC staff on many aspects of DCD form and content. A DCD is envisioned to consist of three parts: an introductory section; Tier 1 information; and Tier 2 information. A DCD must contain information sufficient to support a DCD's design requirements and must be suitable for incorporation by reference in a design certification rule noticed in the *Federal Register*. A DCD should not contain information that is inappropriate, unnecessary or undesirable for codification in the NRC's regulations. Thus, proprietary information would not be included in a DCD. Further, conceptual information in a SSAR relating to out-of-scope site-specific design interfaces should be excluded from a DCD because this information is not intended to be binding on future COL applicants. Similarly, the NRC staff has agreed that other types of COL license information, so-called "COL Action Items," are not appropriate for inclusion in the DCD. Also, the industry and NRC staff agree that the design PRA is inappropriate for inclusion in a DCD. Instead, a subset of design PRA information, the nature and extent of which is the subject of continuing detailed interactions between the industry and the NRC staff (as discussed below), will be incorporated in a DCD.

The following algorithm essentially describes the the industry's view of the contents of a DCD:

DCD = SSAR minus proprietary information
 minus conceptual information and "COL Action Items"
 minus the design PRA
 plus Certified Design Material (i.e., Tier 1 information)
 plus an appropriate subset of design PRA information
 (e.g., key PRA assumptions and severe accident insights)

The NRC staff forwarded to each plant designer on August 26, 1993, preliminary guidance outlining the proposed form and content of a DCD. While the guidance reflected many areas of agreement, as noted above, it also raised a number of important issues related to the detailed implementation of the DCD concept and implications for COL applicants/holders. The industry provided comments (Reference 4) on the NRC staff's preliminary DCD guidance on September 28, 1993, and met with the staff to discuss DCD issues on October 12, 1993. As a result of these interactions, two main issues have emerged that the industry and NRC staff continue to address. The first is the nature and treatment for rulemaking purposes of secondary references contained in the DCD. At issue is the extent to which references to codes, standards, Regulatory Guides, etc., cited in Tier 1 or Tier 2 of the DCD need to be explicitly "incorporated by reference" in specific design certification rules. Because there are many hundreds of such references in a typical SSAR, this issue has significant potential implications for the workability of the design certification process and for design certification schedules. It is important to note that many of these references were not written or configured to be elevated to the status of a rule. Thus, appropriate resolution is of paramount importance to the industry. The secondary references issue relates directly to ANPR Section A.5, Contents of the ELWR Design Certification, and is discussed further in Attachment B and Reference 7.

The second major DCD form and content issue is related to the regulatory significance of information contained in the DCD and, in particular, design PRA information. In sum, the NRC staff is apparently seeking to incorporate design PRA information that is significantly greater in volume and detail than the industry considers necessary or appropriate. As described in the NRC staff's preliminary DCD guidance and at our October 12 meeting, the staff position on the nature and extent of PRA information appropriate for inclusion in a rule represents a significant expansion of the previously understood staff position that only qualitative descriptions of key PRA assumptions and severe accident insights and features would be captured. Significantly, and of great concern to the industry because of potentially significant adverse implications for COL applicants/holders, the revised NRC staff position seeks to incorporate a substantial portion of the design PRA, including detailed quantitative results. As discussed in our November 8, 1993, draft industry point paper (Reference 5) titled, "Regulatory Significance of Information Contained in DCDs," the industry is particularly concerned with the consequences of the new NRC staff position with respect to the conduct of Section 50.59 safety evaluations. Inclusion in the DCD (and therefore the rule) of the design PRA, or a subset thereof containing detailed, quantitative PRA results, would

elevate this information to become part of the licensing basis for the ALWR. This, in turn, might be seen as requiring owner/operators to use PRA in all Section 50.59 evaluations because many plant modifications might cause some insignificant change in the quantitative results, rankings, etc., of the PRA that the NRC staff proposes to codify as part of the DCD. Required use of PRA to support Section 50.59 evaluations would unnecessarily increase the complexity and cost of implementation of design changes and would severely erode the flexibility needed by COL applicants and holders intended by Part 52 and by the Commission. ^{and}

As discussed in our November 8 paper, the ostensible purpose for the NRC staff's position is to ensure use of PRA in design change evaluations so that severe accident features in the design will not unknowingly be compromised. However, it is not a purpose of Section 50.59, nor of the "Section 50.59-like" process described in response to ANPR Topic 2, to mandate the process by which safety evaluations must be conducted or the resources (e.g., a PRA) that must be utilized. Currently, plants that have PRAs or other risk-insight capabilities (e.g., IPE, IPEEE) utilize those resources as part of the Section 50.59 evaluations to the extent plant management judges their use appropriate. Consistent with the industry guidance document NSAC-125, "Guidelines for 10 CFR 50.59 Safety Evaluations," PRA is not to be regarded as an absolute determinant, but as one possible tool for evaluating plant changes. As stated by the NRC staff in SECY-92-287, "[I]nsights on severe accident and technical issues have been incorporated into the specific designs in both the DCD and FSER based on guidance from previous SRMs and SECY papers." The NRC staff also states, and we agree, "[t]he proposed "Section 50.59-like" process will ensure preservation of these insights."

We have similar concerns, as discussed in Reference 5, regarding the NRC staff seeking (as indicated in their August 26, 1993, preliminary guidance on DCD form and content) to ensure the use of "road maps" and the review of unselected severe accident features as part of Section 50.59 safety evaluations.

We note that the revised NRC staff position would be very costly with respect to both resources and schedule for completing DCDs and commencing design certification rulemakings, without discernible safety benefit to the public. The industry recommends that the earlier NRC staff position, which was cogently described to the Commission in a briefing by senior staff management on November 23, 1992, be sustained. We note that

the Commission appeared to clearly understand and agree with the course of action described by the NRC staff at this briefing.

Reference 5 discusses the industry concerns in this area in detail and provides an alternative approach and rationale for resolving this aspect of DCD form and content consistent with the original position expressed by NRC senior management regarding the extent of PRA information appropriate in design certification rules.

The issue of PRA content in DCDs is also of high importance to the industry due to the potential for significant adverse impact on resources (both vendor and NRC staff), design certification schedules, and owner/operator flexibility in use of the "Section 50.59-like design process. We urge the Commission to effect a return to the previously understood position acknowledged at the November 23, 1992, briefing by NRC staff senior management and reflected in the industry's November 8 point paper (Reference 5).

INDUSTRY COMMENTS ON NRC ANPR

**"Rulemaking to Grant Standard Design Certification
for Evolutionary LWR Designs"**

Issues Arising from ANPR Appendix 2
Draft Proposed Design Certification Rule

Significant Issues

1. Section A.5 - Contents of the ELWR Design Certification

The NRC staff proposes to identify in Section A.5(a) those documents approved by the *Federal Register* for incorporation by reference and deemed part of the ELWR design certification. As noted in Attachment A, response to ANPR Topic 9, the extent to which documents, other than the DCD, are to be incorporated by reference in specific design certification rules is an issue of paramount importance to the industry due to potentially significant adverse impact on design certification rule clarity and certainty as well as on resources and schedule. The appropriate handling of secondary references continues to be the subject of ongoing interaction between the industry and NRC staff because of its potential impact. The industry position and proposed course of action is described in Reference 7 (attached).

2. Section A.7 - Regulations Applicable to the ELWR Design Certification

The industry strongly opposes the proposed restatement and designation of agency positions on technical and severe accident issues as "applicable regulations" within specific design certification rules. In Reference 2, the industry communicated to the Commission its substantial concerns with this NRC staff proposal and the basis for considering it duplicative, unnecessary, and a source of almost certain controversy and delay if implemented. Our concerns are restated in Attachment A of these comments in

response to Topic 8 of the ANPR. The example given in Section A.7(b)(4)(iii) is illustrative of the industry's concerns. This provision seems to indicate new regulatory requirements for "operation, maintenance and monitoring activities" beyond those of Part 50 would be applicable to COL holders. However, no elaboration of what these additional requirements would entail or justification for the additional requirements is provided.

We strongly recommend that the Commission disapprove the NRC staff proposal regarding "applicable regulations" and, accordingly, that Section A.7 of the draft-proposed rule in the ANPR be deleted.

3. Section A.9 - Issue Resolution for the ELWR Design Certification

Section A.9 of the draft proposed design certification rule states:

(a) all radiological safety issues necessarily associated with approval of the information set forth in the ELWR DCD are "resolved in connection with the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4); and (b) all environmental issues necessarily associated with approval of the information set forth in the ELWR DCD, and the Environmental Impact Statement or Environmental Analysis for this design are "resolved in connection with the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4).

As extensive as a DCD is, the NRC staff will have reviewed and approved substantially more information in arriving at its safety determinations than is contained therein. In the view of the industry, **all matters within the scope of the approved design** will have been "resolved in connection with issuance of the design certification."

In a letter dated September 10, 1993, NUMARC submitted a draft proposed rule (Reference 3) for NRC staff use in formulating the proposed rule to be forwarded for Commission consideration. This document contains the following language that is recommended as an appropriate alternative to ANPR Section A.9:

Except as provided in 10 CFR 2.758, the Commission shall treat as resolved in any subsequent proceeding all matters within the scope of the design approved in the design certification rulemaking. These matters include the following:

- i. all matters discussed in the DCD and the standard safety analysis report for the (ALWR) standard design;*
- ii. all matters discussed in the staff's final safety evaluation report and final design approval for the (ALWR);*
- iii. all matters raised and resolved in the rulemaking proceeding on the design certification rule for the (ALWR).*

Additionally, the Commission has determined that the design structures and functions of the (ALWR) as described in the DCD satisfy the Commission's existing regulations and provide reasonable assurance of adequate protection of the health and safety of the public. Inherent in this determination is the finding that additional design features and functions are not necessary for the (ALWR) standard design. The lack of need for such additional design features and functions is also considered a matter resolved in connection with issuance of Subpart D (i.e., this design certification rule).

The scope of "matters considered resolved" reflected in the industry's draft proposed rule is both appropriate and vital to assuring the objectives of design certification rulemaking, with its emphasis on "front-end" issue resolution and the predictability and stability of the Part 52 licensing process. We urge the Commission to adopt such a formulation of scope of finality of the design certification process.

4. Section A.13 - Change Process (Finality of "Section 50.59-like" Changes)

As indicated in the Attachment A response to ANPR Topic 2, the industry disagrees with the draft proposed rule provision in Section A.13(d)(3) that changes properly implemented via the "Section 50.59-like" process would cause a loss of finality relative to the affected portion of the design and would be subject to subsequent legal challenge. In the industry responses to SECY-92-287/287A, we have noted that Part 52 explicitly provides that Section 50.59-type changes from Tier 2 are permissible. Such changes are thus done in compliance with the rule and do not affect design finality so long as the Section 50.59-like process has been properly implemented.

Accordingly, aspects of the Tier 2 design changed by a COL applicant via the "Section 50.59-like" process should continue to be considered matters resolved in connection with a design certification for purposes of the COL proceeding. The only issue permitted to be challenged in a subsequent COL hearing is whether the Section 50.59 process had been properly implemented. Likewise, such changes made subsequent to COL issuance could be challenged in the Part 52 proceeding prior to fuel load authorization only on the basis that the change resulted in non-compliance with applicable acceptance criteria. It is understood that changes from Tier 2 that require NRC approval would, of course, be subject to a hearing opportunity as specified in Part 52.

As with current operating plants, records of changes made without NRC approval will be retained and reports periodically forwarded to the NRC. In this regard, we note that the recordkeeping provision in ANPR Section A.15(b) proposes that reports of changes from Tier 2 design information be submitted quarterly to the NRC. As indicated in our October 5, 1992, comments on SECY-92-287 (Reference 1), the industry recognizes that during construction it is important for the NRC to be cognizant of the changes being implemented which might have licensing or design certification implications. However, the NRC staff proposal to require quarterly reporting of Section 50.59 changes appears to be unnecessarily burdensome and in excess of what is needed to keep the NRC properly informed. The NRC staff has offered no basis for requiring a four-fold increase in frequency over the annual reporting of changes made under Section 50.59. The industry has proposed establishing a six-month reporting interval rather than quarterly reporting as appropriately balancing the heightened NRC need for design change information during construction with the equally important need to avoid

unnecessarily diverting owner/operator resources to meet excessive reporting requirements. Further, we note that substantial economic and licensing disincentives are expected to effectively limit the number of design changes at ALWR facilities.

In summary, the industry recommends that the proposed Section A.13(d)(3) provision be deleted and language be included in the Statements of Consideration accompanying each specific design certification rule affirming that, consistent with current practice, changes properly implemented via the "Section 50.59-like" process do not affect the finality associated with the affected design. In addition, the industry recommends that the quarterly reporting requirement of Section A.15(b) should be reduced to bi-annual reporting.

Other Issues

1. The draft-proposed rule in the ANPR is silent on many of the administrative - technical drafting requirements (including the NEPA provisions attendant to the consolidated rulemaking proceeding) more fully developed in the industry's September 10, 1993, proposed draft rule. Industry will shortly be providing for NRC consideration an updated draft-proposed design certification rule which will modify the September 10 submittal to incorporate the comments herein and thus represent our current view as it has evolved since that date.
2. Although the industry recognizes the necessity and desirability for recordkeeping and reporting requirements, it is concerned that the suggested requirements appear to go beyond current requirements without any substantive justification. Specific suggested language will be submitted shortly in a modified industry-proposed draft design certification rule.

References

1. NUMARC letter of comment (Rasin to Crutchfield), dated October 5, 1992, on SECY-92-287
2. NUMARC letter of comment (Rasin to Chilk), dated May 25, 1993, on SECY-92-287A
3. NUMARC letter (Rasin to Crutchfield), dated September 10, 1993, forwarding a draft proposed design certification rule
4. NUMARC letter of comment (Rasin to Crutchfield), dated September 28, 1993, on preliminary NRC staff guidance on DCD form and content
5. NUMARC letter (Rasin to Crutchfield), dated November 8, 1993, forwarding the draft industry paper, "Regulatory Significance of Information Contained in DCDs"
6. NUMARC letter of comment (Rasin to Chilk), dated December 22, 1992, responding to the NRC ANPR on ALWR severe accident performance
7. **(Attached)** Revised draft industry paper, titled, "Incorporation by Reference in a Design Certification Rule," previously forwarded in preliminary draft form via NUMARC letter (Rasin to Crutchfield), dated December 6, 1993.