

NOTICE OF AVAILABILITY OF DRAFT TEMPLATES FOR DESIGN CERTIFICATION PROPOSED RULES

The NRC staff (staff) is making publicly available two draft “templates” that the staff intends to use when preparing key documents for a proposed design certification rule. The draft templates being made public are:

Federal Register Notice of Proposed Rulemaking
Environmental Assessment

The draft templates are intended to be starting points for preparing these rulemaking documents. ¹ Non-highlighted text is considered “standard” and ordinarily would not be altered in the document preparation and internal NRC approval process. The standard text is based largely on the AP1000 proposed rule package (the most recent DC rulemaking) and updated, in part, to reflect the 10 CFR Part 52 reorganization rulemaking finalized in 2007 and additional lessons learned during the ongoing reviews of design certification applications. Highlighted text, by contrast, is considered “custom” and is application-specific, such as the name of the design and the name of the applicant. The staff’s rulemaking project manager would replace the highlighted text from the template with custom text, based upon information in the application and the NRC’s safety and regulatory review of the design certification application. In this fashion, the templates should provide a greater level of consistency and quality for these design certification rulemaking documents, thereby reducing the time needed for the staff to prepare, review and approve the documents for transmittal to the Commission.

The staff developed these draft templates as a result of the NRC staff’s lean six sigma (LSS) review of the design certification rulemaking process (refer to SECY-09-0018, dated January 30, 2009). The draft templates are being made available to the public in order to facilitate public participation at a Category 3 public meeting scheduled for March 4, 2010 (refer to the NRC’s public meeting website at <http://www.nrc.gov/public-involve/public-meetings/meeting-schedule.html> for additional information). At this public meeting, the staff will describe the LSS process, how the staff developed these templates, and how the staff will use the templates in the design certification rulemaking process. Members of the public will be afforded an opportunity to ask the staff (including attorneys from the NRC’s Office of the General Counsel) questions about the content of the templates, as well as the staff’s planned use of the templates in the design certification rulemaking process. A meeting notice will be published on the NRC’s public meeting website. In addition, the NRC staff will send e-mails to stakeholders who have expressed an interest in, or participated in past design certification and Part 52 rulemakings, advising them of the meeting.

¹ A proposed design certification rulemaking package will consist of, in addition to the two documents for which draft templates are being made available, a Commission (SECY) paper and support documents such as a communication plan, draft press release, and Congressional letters. The NRC staff has developed templates for the SECY paper and support documents as part of the LSS process. However, because these other documents are largely based on or are in support of the text of the package documents, and to focus the public meeting on the proposed rule package templates, the staff is not including the support document templates in this document.

These draft templates have not been reviewed or approved by NRC staff management, the Office of General Counsel, or the Commission. They are being made available to the public for information only. These templates may change as the result of further internal NRC review. The staff is not accepting written comments on the draft templates.

Because some text in these draft templates is highlighted and some text is not highlighted, be sure to use a color printer if you print the templates.

Please direct any questions you may have on the draft templates or the public meeting to:

George M. Tartal, Senior Project Manager
Rulemaking and Guidance Development Branch
Division of New Reactor Licensing
Office of New Reactors
US Nuclear Regulatory Commission
301-415-0016
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Attachments:

Draft Proposed Rule Federal Register Notice Template
Draft Environmental Assessment Template

NUCLEAR REGULATORY COMMISSION
10 CFR PART 52
RIN 3150-XXXX
NRC-20XX-XXXX

NAME OF DESIGN Design Certification

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC or Commission) proposes to amend its regulations to certify the **NAME OF DESIGN** standard plant design. This action is necessary so that applicants or licensees intending to construct and operate a **NAME OF DESIGN** design may do so by referencing this design certification rule (DCR). The applicant for certification of the **NAME OF DESIGN** design is **NAME OF VENDOR**. The public is invited to submit comments on this proposed DCR, the generic design control document (DCD) that would be incorporated by reference into the DCR, and the environmental assessment (EA) for the **NAME OF DESIGN** design.

DATES: Submit comments on the DCR, DCD and/or EA by **[insert date 75 days after publication in the Federal Register.]** Submit comments specific to the information collections aspects of this rule by **[insert date 30 days after publication in the Federal Register.]** Comments received after the above dates will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after these dates.

ADDRESSES: You may submit comments by any one of the following methods. Please include Docket ID **NRC-20XX-XXXX** in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC website and on the Federal rulemaking website Regulations.gov. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

Documents which are not publicly available because they are considered to be either Sensitive Unclassified Non-Safeguards information (SUNSI) or Safeguards Information (SGI) are available to interested persons who may wish to comment on the proposed design certification. Such persons shall follow the procedures described in Section VI of the Supplementary Information section of this notice.

Federal Rulemaking Website: Go to <http://www.regulations.gov> and search for documents filed under Docket ID **NRC-20XX-XXXX**. Address questions about NRC dockets to Carol Gallagher, telephone 301-492-3668; e-mail Carol.Gallagher@nrc.gov.

Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

E-mail comments to: Rulemaking.Comments@nrc.gov. If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at 301-415-1677.

Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 am and 4:15 pm Federal workdays. (Telephone 301-415-1677).

Fax comments to: Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101.

You may submit comments on the information collections by the methods indicated in the Paperwork Reduction Act Statement.

You can access publicly available documents related to this document using the following methods:

NRC's Public Document Room (PDR): The public may examine and have copied for a fee publicly available documents at the NRC's PDR, Public File Area O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

NRC's Agencywide Documents Access and Management System (ADAMS):

Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1-800-397-4209, or 301-415-4737, or by e-mail to pdr.resource@nrc.gov.

Federal Rulemaking Website: Public comments and supporting materials related to this proposed rule can be found at <http://www.regulations.gov> by searching on Docket ID: **NRC-20XX-XXXX**.

FOR FURTHER INFORMATION CONTACT: **RULE PM'S NAME**, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone 301-415-XXXX; e-mail: FIRST.LAST@nrc.gov; or **DESIGN PM'S NAME**, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone 301-415-XXXX; e-mail: FIRST.LAST@nrc.gov.

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I. Background

Title 10 to the *Code of Federal Regulations*, part 52 (10 CFR part 52), subpart B, sets forth the process for obtaining standard design certifications. On DATE (XX FR XXXXX), NAME OF VENDOR tendered its application for certification of the NAME OF DESIGN standard plant design with the NRC. NAME OF VENDOR submitted this application in accordance with subpart B of 10 CFR part 52. The NRC formally accepted the application as a docketed application for design certification (Docket No. 52-XXX) on DATE (XX FR XXXXX). The pre-application information submitted before the NRC formally accepted the application can be found in the NRC's Agencywide Documents Access and Management System (ADAMS) under Docket No. PROJXXXX (Project No. XXX).

The application for design certification of the NAME OF DESIGN design has been referenced in the following combined license applications as of the date of this document:

NAME OF APPLICANT, NAME OF PLANT, DOCKET NO., FR CITATION

FOR DESIGNS USING "FSAR" INSTEAD OF "DCD", INSERT THE FOLLOWING

PARAGRAPH: In its application, NAME OF VENDOR submitted a generic design document called the NAME OF DESIGN Final Safety Analysis Report (FSAR) to fulfill the requirements of 10 CFR 52.47(a). However, a combined license applicant is also required to submit a different FSAR under 10 CFR 52.79(a). Because the combined license FSAR incorporates by reference the generic design FSAR, the NRC believes that the use of the term FSAR for both documents could lead to confusion. Further, all approved design certifications and all other docketed applications for design certification refer to the generic design document as a design control document (DCD) rather than an FSAR. In order to maintain consistency with other designs, and to minimize any potential confusion between the documents, the NRC hereafter refers to the generic design FSAR as the generic DCD in this proposed rule.

II. Regulatory and Policy Issues

DESCRIBE ALL REGULATORY AND POLICY ISSUE RAISED TO THE COMMISSION IN EARLIER COMMUNICATIONS THAT WERE IDENTIFIED AS PART OF THE STAFF'S REVIEW OF THE DESIGN CERTIFICATION APPLICATION. EACH ISSUE WOULD BE IDENTIFIED, THE ULTIMATE RESOLUTION DESCRIBED, AND THE BASIS FOR THE RESOLUTION EXPLAINED.

III. Technical Evaluation of the NAME OF DESIGN

THIS SECTION SHOULD DISCUSS THE PROCESS FOR THE NRC'S TECHNICAL REVIEW AND IDENTIFY THE SIGNIFICANT TECHNICAL ISSUES RESOLVED. THESE ISSUES SHOULD BE DERIVED FROM PREVIOUS COMMISSION COMMUNICATIONS PREPARED FOR THIS DESIGN. The NRC staff issued a final safety evaluation report (FSER) for the NAME OF DESIGN design in MONTH YEAR (NUREG-XXXX). The FSER provides the basis for issuance of a final design certification under subpart B to 10 CFR Part 52. IF APPLICABLE: The final design approval for the NAME OF DESIGN design was issued on DATE (XX FR XXXXX).

ONE SPECIFIC SET OF MATTERS THAT MUST BE ADDRESSED HERE ARE ANY EXEMPTIONS THAT ARE PROVIDED TO THE APPLICABLE REGULATIONS (PARAGRAPH V OF THE RULE). EACH EXEMPTION MUST BE IDENTIFIED AND THE BASES (RATIONALE) FOR PROVIDING THE EXEMPTION MUST BE CROSS-REFERENCED TO THE APPLICABLE DISCUSSION IN THE FSER FOR THE DESIGN CERTIFICATION.

IV. Section-by-Section Analysis

The following discussion sets forth the purpose and key aspects of each section and paragraph of the proposed **NAME OF DESIGN** DCR. All section and paragraph references are to the provisions in the proposed **Appendix X** to 10 CFR part 52 unless otherwise noted. The NRC has modeled the **NAME OF DESIGN** DCR on the existing DCRs, with certain modifications where necessary to account for differences in the **NAME OF DESIGN** design documentation, design features, and environmental assessment (including severe accident mitigation design alternatives (SAMDA)). As a result, the DCRs are standardized to the extent practical.

A. Introduction (Section I)

The purpose of Section I of proposed **Appendix X** to 10 CFR part 52 (this appendix) is to identify the standard plant design that would be approved by this DCR and the applicant for certification of the standard design. Identification of the design certification applicant is necessary to implement this appendix, for two reasons. First, the implementation of 10 CFR 52.63(c) depends on whether an applicant for a COL contracts with the design certification applicant to provide the generic DCD and supporting design information. If the COL applicant does not use the design certification applicant to provide the design information and instead uses an alternate nuclear plant vendor, then the COL applicant must meet the requirements in 10 CFR 52.73. The alternate vendor must demonstrate that they are qualified to provide the standard plant design information. Also, paragraph X.A.1 would require the design certification applicant to maintain the generic DCD throughout the time this appendix may be referenced.

B. Definitions (Section II)

During development of the first two DCRs, the Commission decided that there would be both generic (master) DCDs maintained by the NRC and the design certification applicant, as well as individual plant-specific DCDs maintained by each applicant and licensee that reference this appendix. This distinction is necessary in order to specify the relevant plant-specific requirements to applicants and licensees referencing the appendix. In order to facilitate the maintenance of the master DCDs, the NRC proposes that each application for a standard design certification be updated to include an electronic copy of the final version of the DCD. The final version would be required to incorporate all amendments to the DCD submitted since the original application as well as any changes directed by the NRC as a result of its review of the original DCD or as a result of public comments. This final version would become the master DCD incorporated by reference in the DCR. The master DCD would be revised as needed to include generic changes to the version of the DCD approved in this design certification rulemaking. These changes would occur as the result of generic rulemaking by the Commission, under the change criteria in Section VIII.

The Commission would also require each applicant and licensee referencing this appendix to submit and maintain a plant-specific DCD as part of the combined license Final Safety Analysis Report (FSAR). This plant-specific DCD would include or incorporate by reference the information in the generic DCD. The plant-specific DCD would be updated as necessary to reflect the generic changes to the DCD that the Commission may adopt through rulemaking, plant-specific departures from the generic DCD that the Commission imposed on the licensee by order, and any plant-specific departures that the licensee chooses to make in accordance with the relevant processes in Section VIII. Thus, the plant-specific DCD would function like an updated FSAR because it would provide the most complete and accurate

information on a plant's licensing basis for that part of the plant within the scope of this appendix. Therefore, this appendix would define both a generic DCD and a plant-specific DCD.

Also, the Commission decided to treat the technical specifications (TS) in **Section 16.1** of the generic DCD as a special category of information and to designate them as generic TS in order to facilitate the special treatment of this information under this appendix. A COL applicant must submit plant-specific TS that consist of the generic TS, which may be modified under paragraph VIII.C, and the remaining plant-specific information needed to complete the TS. The FSAR that is required by 10 CFR 52.79 will consist of the plant-specific DCD, the site-specific portion of the FSAR, and the plant-specific TS.

The terms Tier 1, Tier 2, Tier 2*, and COL action items (license information) are defined in this appendix because these concepts were not envisioned when 10 CFR part 52 was developed. The design certification applicants and the NRC used these terms in implementing the two-tiered rule structure that was proposed by representatives of the nuclear industry after issuance of 10 CFR part 52. Therefore, appropriate definitions for these additional terms are included in this appendix. The nuclear industry representatives requested a two-tiered structure for the DCRs to achieve issue preclusion for a greater amount of information than was originally planned for the DCRs, while retaining flexibility for design implementation. The Commission approved the use of a two-tiered rule structure in its staff requirements memorandum (SRM), dated February 14, 1991, on SECY-90-377, "Requirements for Design Certification Under 10 CFR Part 52," dated November 8, 1990. This document and others are available in the Regulatory History of Design Certification (see Section V of this document).

The Tier 1 portion of the design-related information contained in the DCD would be *certified* by this appendix and, therefore, subject to the special backfit provisions in paragraph VIII.A. An applicant who references this appendix would be required to include or incorporate by

reference and comply with Tier 1, under paragraphs III.B and IV.A.1. This information consists of an introduction to Tier 1, the system based and non-system based design descriptions and corresponding ITAAC, significant interface requirements, and significant site parameters for the design (refer to Section C.I.1.8 of Regulatory Guide 1.206 for guidance on significant interface requirements and site parameters). The design descriptions, interface requirements, and site parameters in Tier 1 were derived from Tier 2, but may be more general than the Tier 2 information. The NRC staff's evaluation of the Tier 1 information is provided in **Section 14.3** of the FSER. Changes to or departures from the Tier 1 information must comply with Section VIII.A.

The Tier 1 design descriptions serve as requirements for the lifetime of a facility license referencing the design certification. The ITAAC verifies that the as-built facility conforms with the approved design and applicable regulations. Under 10 CFR 52.103(g), the Commission must find that the acceptance criteria in the ITAAC are met before authorizing operation. After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not constitute regulatory requirements for licensees or for renewal of the COL. However, subsequent modifications to the facility within the scope of the design certification must comply with the design descriptions in the plant-specific DCD unless changes are made under the change process in Section VIII. The Tier 1 interface requirements are the most significant of the interface requirements for systems that are wholly or partially outside the scope of the standard design. Tier 1 interface requirements must be met by the site-specific design features of a facility that references this appendix. An application that references this appendix must demonstrate that the site characteristics at the proposed site fall within the site parameters (both Tier 1 and Tier 2) (refer to paragraph IV.D of this document).

Tier 2 is the portion of the design-related information contained in the DCD that would be *approved* by this appendix but not certified. Tier 2 information would be subject to the backfit provisions in paragraph VIII.B. Tier 2 includes the information required by §§ 52.47(a) and 52.47(c) (with the exception of generic TS and conceptual design information) and the supporting information on inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met. As with Tier 1, paragraphs III.B and IV.A.1 would require an applicant who references this appendix to include or incorporate by reference Tier 2 and to comply with Tier 2, except for the COL action items, including the investment protection short-term availability controls in Section 16.3 of the generic DCD. The definition of Tier 2 makes clear that Tier 2 information has been determined by the Commission, by virtue of its inclusion in this appendix and its designation as Tier 2 information, to be an approved sufficient method for meeting Tier 1 requirements. However, there may be other acceptable ways of complying with Tier 1 requirements. The appropriate criteria for departing from Tier 2 information would be specified in paragraph VIII.B. Departures from Tier 2 information would not negate the requirement in paragraph III.B to incorporate by reference Tier 2 information.

A definition of "combined license action items" (COL information), which is part of the Tier 2 information, would be added to clarify that COL applicants who reference this appendix are required to address COL action items in their license application. However, the COL action items are not the only acceptable set of information. An applicant may depart from or omit COL action items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items would not be requirements for the licensee unless they are restated in the FSAR. For additional discussion, see Section IV.D of this document.

NOTE: THIS CONCEPT OF “AVAILABILITY CONTROLS” APPLIES TO PASSIVE PLANTS LIKE AP1000 (AS SHOWN IN THIS TEMPLATE) AND ESBWR, BUT MAY BE DENOTED DIFFERENTLY IN THE DCD. REFER TO SECTION C OF THE SECTION BY SECTION ANALYSIS FOR ADDITIONAL GUIDANCE. IF THIS CONCEPT IS APPLICABLE TO THE DESIGN, INSERT THE FOLLOWING PARAGRAPH: The investment protection short-term availability controls, which are set forth in Section 16.3 of the generic DCD, would be added to the information that is part of Tier 2 to clarify that the availability controls are not operational requirements for the purposes of paragraph VIII.C. Rather, the availability controls are associated with specific design features. The availability controls may be changed if the associated design feature is changed under paragraph VIII.B. For additional discussion, see Section IV.C of this document.

Certain Tier 2 information has been designated in the generic DCD with brackets and italicized text as “Tier 2*” information and, as discussed in greater detail in the section-by-section analysis for Section H, a plant-specific departure from Tier 2* information would require prior NRC approval. However, the Tier 2* designation expires for some of this information when the facility first achieves full power after the finding required by 10 CFR 52.103(g). The process for changing Tier 2* information and the time at which its status as Tier 2* expires is set forth in paragraph VIII.B.6. Some Tier 2* requirements concerning special pre-operational tests are designated to be performed only for the first plant or first three plants referencing the **NAME OF DESIGN** DCR. The Tier 2* designation for these selected tests would expire after the first plant or first three plants complete the specified tests. However, a COL action item requires that subsequent plants also perform the tests or justify that the results of the first-plant-only or first-three-plants-only tests are applicable to the subsequent plant.

Section 50.59 of 10 CFR sets forth thresholds for permitting changes to a plant as described in the FSAR without NRC approval. Inasmuch as § 50.59 is the primary change mechanism for operating nuclear plants, the Commission believes that future plants referencing the **NAME OF DESIGN** DCR should utilize thresholds as close to § 50.59 as is practicable and appropriate. Because of some differences in how the change control requirements are structured in the DCRs, certain definitions contained in § 50.59 are not applicable to 10 CFR part 52 and are not being included in this proposed rule. The Commission is including a definition for a “departure from a method of evaluation,” (paragraph II.G), which is appropriate to include in this rulemaking so that the eight criteria in paragraph VIII.B.5.b will be implemented as intended.

C. Scope and Contents (Section III)

The purpose of Section III is to describe and define the scope and contents of this design certification and to set forth how documentation discrepancies or inconsistencies are to be resolved. Paragraph III.A is the required statement of the Office of the Federal Register (OFR) for approval of the incorporation by reference of Tier 1, Tier 2, and the generic TS into this appendix. Paragraph III.B requires COL applicants and licensees to comply with the requirements of this appendix. The legal effect of incorporation by reference is that the incorporated material has the same legal status as if it were published in the *Code of Federal Regulations*. This material, like any other properly-issued regulation, has the force and effect of law. Tier 1 and Tier 2 information, as well as the generic TS, have been combined into a single document called the generic DCD, in order to effectively control this information and facilitate its incorporation by reference into the rule. The generic DCD was prepared to meet the technical information contents of application requirements for DCs under 10 CFR 52.47(a) and the

requirements of the OFR for incorporation by reference under 1 CFR part 51. One of the requirements of the OFR for incorporation by reference is that the design certification applicant must make the generic DCD available upon request after the final rule becomes effective. Therefore, paragraph III.A would identify a **NAME OF VENDOR** representative to be contacted in order to obtain a copy of the generic DCD.

IF THE “AVAILABILITY CONTROLS” CONCEPT IS APPLICABLE TO THE DESIGN, INSERT THE FOLLOWING PARAGRAPH: Paragraphs III.A and III.B would also identify the investment protection short-term availability controls in Section 16.3 of the generic DCD as part of the Tier 2 information. During its review of the **NAME OF DESIGN** design, the NRC determined that residual uncertainties associated with passive safety system performance increased the importance of non-safety-related active systems in providing defense-in-depth functions that back-up the passive systems. As a result, **NAME OF VENDOR** developed administrative controls to provide a high level of confidence that active systems having a significant safety role are available when challenged. **NAME OF VENDOR** named these additional controls “investment protection short-term availability controls.” The Commission included this characterization in Section III to ensure that these availability controls would be binding on applicants and licensees that reference this appendix and would be enforceable by the NRC. The NRC’s evaluation of the availability controls is provided in Chapter 22 of the **FSER**.

The generic DCD (master copy) for this design certification would be electronically accessible in ADAMS (accession number **MLXXXXXXXXXX**); at the OFR; and at www.regulations.gov by searching under Docket ID **NRC-20XX-XXXX**. Copies of the generic DCD would also be available at the NRC’s PDR. Questions concerning the accuracy of information in an application that references this appendix will be resolved by checking the

master copy of the generic DCD in ADAMS. If the design certification applicant makes a generic change (rulemaking) to the DCD under 10 CFR 52.63 and the change process provided in Section VIII, then at the completion of the rulemaking the NRC would request approval of the Director, OFR, for the revised master DCD. The Commission would require that the design certification applicant maintain an up-to-date copy of the master DCD that includes any generic changes it has made under paragraph X.A.1 because it is likely that most applicants intending to reference the standard design would obtain the generic DCD from the design certification applicant. Plant-specific changes to and departures from the generic DCD would be maintained by the applicant or licensee that references this appendix in a plant-specific DCD under paragraph X.A.2.

In addition to requiring compliance with this appendix, paragraph III.B would clarify that the conceptual design information and **NAME OF VENDOR's** evaluation of SAMDAs are not considered to be part of this appendix. The conceptual design information is for those portions of the plant that are outside the scope of the standard design and are contained in Tier 2 information. As provided by 10 CFR 52.47(a)(24), these conceptual designs are not part of this appendix and, therefore, are not applicable to an application that references this appendix. Therefore, the applicant would not be required to conform with the conceptual design information that was provided by the design certification applicant. The conceptual design information, which consists of site-specific design features, was required to facilitate the design certification review. Conceptual design information is neither Tier 1 nor Tier 2. **Section X.X of Tier 2** identifies the location of the conceptual design information. **NAME OF VENDOR's** evaluation of various design alternatives to prevent and mitigate severe accidents does not constitute design requirements. The Commission's assessment of this information is discussed in Section X of this document.

Paragraphs III.C and III.D would set forth the way potential conflicts are to be resolved. Paragraph III.C would establish the Tier 1 description in the DCD as controlling in the event of an inconsistency between the Tier 1 and Tier 2 information in the DCD. Paragraph III.D would establish the generic DCD as the controlling document in the event of an inconsistency between the DCD and the FSER for the certified standard design.

Paragraph III.E would clarify that design activities that are wholly outside the scope of this design certification may be performed using actual site characteristics, provided the design activities do not affect Tier 1 or Tier 2, or conflict with the interface requirements in the DCD. This provision would apply to site-specific portions of the plant, such as the administration building. Because this statement is not a definition, this provision has been located in Section III.

D. Additional Requirements and Restrictions (Section IV)

Section IV would set forth additional requirements and restrictions imposed upon an applicant who references this appendix. Paragraph IV.A would set forth the information requirements for these applicants. This paragraph would distinguish between information and/or documents which must actually be *included* in the application or the DCD, versus those which may be *incorporated by reference* (*i.e.*, referenced in the application as if the information or documents were included in the application). Any incorporation by reference in the application should be clear and should specify the title, date, edition, or version of a document, the page number(s), and table(s) containing the relevant information to be incorporated.

Paragraph IV.A.1 would require an applicant who references this appendix to incorporate by reference this appendix in its application. The legal effect of such an incorporation by reference is that this appendix would be legally binding on the applicant or licensee. Paragraph

IV.A.2.a would require that a plant-specific DCD be included in the initial application to ensure that the applicant commits to complying with the DCD. This paragraph would also require the plant-specific DCD to either include or incorporate by reference the generic DCD information. Further, this paragraph would also require the plant-specific DCD to use the same format as the generic DCD and reflect the applicant's proposed exemptions and departures from the generic DCD as of the time of submission of the application. The plant-specific DCD would be part of the plant's FSAR, along with information for the portions of the plant outside the scope of the referenced design. Paragraph IV.A.2.a would also require that the initial application include the reports on departures and exemptions as of the time of submission of the application.

Paragraph IV.A.2.b would require that an application referencing this appendix include the reports required by paragraph X.B for exemptions and departures proposed by the applicant as of the date of submission of its application. Paragraph IV.A.2.c would require submission of plant-specific TS for the plant that consists of the generic TS from **Section X.X** of the DCD, with any changes made under paragraph VIII.C, and the TS for the site-specific portions of the plant that are either partially or wholly outside the scope of this design certification. The applicant must also provide the plant-specific information designated in the generic TS, such as bracketed values (refer to guidance provided in Interim Staff Guidance DC/COL-ISG-8, "Necessary Content of Plant-Specific Technical Specifications").

Paragraph IV.A.2.d would require the applicant referencing this appendix to provide information demonstrating that the proposed site characteristics fall within the site parameters for this appendix and that the plant-specific interface requirements have been met as required by 10 CFR 52.79(d). If the proposed site has a characteristic that exceeds one or more of the site parameters in the DCD, then the proposed site would be unacceptable for this design unless the applicant seeks an exemption under Section VIII and provides adequate justification for locating

the certified design on the proposed site. Paragraph IV.A.2.e would require submission of information addressing COL action items, identified in the generic DCD as COL information in the application. The COL information identifies matters that need to be addressed by an applicant who references this appendix, as required by subpart C of 10 CFR part 52. An applicant may differ from or omit these items, provided that the difference or omission is identified and justified in its application. Based on the applicant's difference or omission, the NRC may impose additional licensing requirement(s) on the COL applicant as appropriate. Paragraph IV.A.2.f would require that the application include the information specified by 10 CFR 52.47(a) that is not within the scope of this rule, such as generic issues that must be addressed or operational issues not addressed by a design certification, in whole or in part, by an applicant that references this appendix. Paragraph IV.A.3 would require the applicant to physically include, not simply reference, the proprietary information and safeguards information referenced in the DCD, or its equivalent, to ensure that the applicant has actual notice of these requirements.

Paragraph IV.B would reserve to the Commission 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. This determination may occur in the context of a subsequent rulemaking modifying 10 CFR part 52 or this design certification rule, or on a case-by-case basis in the context of a specific application for a 10 CFR part 50 construction permit or operating license. This provision is necessary because the previous DCRs were not implemented in the manner that was originally envisioned at the time that 10 CFR part 52 was promulgated. The Commission's concern is with the way ITAAC were developed and the lack of experience with design certifications in license proceedings. Therefore, it is appropriate that the Commission

retain some discretion regarding the way this appendix could be referenced in a 10 CFR part 50 licensing proceeding.

E. Applicable Regulations (Section V)

The purpose of Section V is to specify the regulations that would be applicable and in effect at the time this proposed design certification is approved (i.e., as of the date specified in paragraph V.A, which would be the date that this appendix is approved by the Commission and signed by the Secretary of the Commission). These regulations would consist of the technically relevant regulations identified in paragraph V.A, except for the regulations in paragraph V.B that would not be applicable to this certified design.

In paragraph V.B, the Commission would identify the regulations that do not apply to the NAME OF DESIGN design. The Commission has determined that the NAME OF DESIGN design should be exempt from portions of CITE REGULATIONS, as described in the FSER (NUREG-XXXX) and/or summarized below:

(1) Paragraph XXX of 10 CFR XX.XX – TITLE OF CITED REGULATION.

DESCRIBE ALL REGULATION(S) FOR WHICH THE DESIGN IS BEING EXEMPTED. IF THE EXEMPTION IS ONLY FROM A PORTION OF THE REGULATION, THEN CITE THE SPECIFIC PARAGRAPH OR SUBPARAGRAPH FOR WHICH AN EXEPMTION IS BEING PROVIDED. EACH EXEMPTION MUST CONSIST OF THE FULL LEGAL CITATION OF THE REGULATION AS SHOWN ABOVE. IF APPLICABLE, THE DISCUSSION SHOULD INCLUDE A DESCRIPTION OF THE “ALTERNATE” REQUIREMENT WHICH IS SUBSTITUTING FOR THE EXEMPTED REGULATION AND WHERE THIS CAN BE FOUND IN THE DCD.

F. Issue Resolution (Section VI)

The purpose of Section VI is to identify the scope of issues that would be resolved by the Commission in this rulemaking and, therefore, are “matters resolved” within the meaning and intent of 10 CFR 52.63(a)(5). The section is divided into five parts: paragraph A identifies the Commission’s safety findings in adopting this appendix, paragraph B identifies the scope and nature of issues which are resolved by this rulemaking, paragraph C identifies issues which are not resolved by this rulemaking, paragraph D identifies the backfit restrictions applicable to the Commission with respect to this appendix, and paragraph E identifies the availability of secondary references.

Paragraph VI.A would describe the nature of the Commission’s findings in general terms and make the findings required by 10 CFR 52.54 for the Commission’s approval of this DCR. Furthermore, paragraph VI.A would explicitly state the Commission’s determination that this design provides adequate protection of the public health and safety.

Paragraph VI.B would set forth the scope of issues that may not be challenged as a matter of right in subsequent proceedings. The introductory phrase of paragraph VI.B clarifies that issue resolution as described in the remainder of the paragraph extends to the delineated NRC proceedings referencing this appendix. The remainder of paragraph VI.B describes the categories of information for which there is issue resolution. Specifically, paragraph VI.B.1 would provide that all nuclear safety issues arising from the Atomic Energy Act of 1954, as amended, that are associated with the information in the NRC staff’s FSER (NUREG-XXXX), the Tier 1 and Tier 2 information (including the availability controls in Section X.X of the generic DCD), and the rulemaking record for this appendix are resolved within the meaning of § 52.63(a)(5). These issues include the information referenced in the DCD that are

requirements (i.e., "secondary references"), as well as all issues arising from proprietary and safeguards information which are intended to be requirements.

Paragraph VI.B.2 would provide for issue preclusion of proprietary and safeguards information. Paragraphs VI.B.3, VI.B.4, VI.B.5, and VI.B.6 would clarify that approved changes to and departures from the DCD which are accomplished in compliance with the relevant procedures and criteria in Section VIII continue to be matters resolved in connection with this rulemaking. Paragraphs VI.B.4, VI.B.5, and VI.B.6, which would characterize the scope of issue resolution in three situations, use the phrase "but only for that plant". Paragraph VI.B.4 would describe how issues associated with a design certification rule are resolved when an exemption has been granted for a plant referencing the design certification rule. Paragraph VI.B.5 would describe how issues are resolved when a plant referencing the design certification rule obtains a license amendment for a departure from Tier 2 information. Paragraph VI.B.6 would describe how issues are resolved when the applicant or licensee departs from the Tier 2 information on the basis of paragraph VIII.B.5, which would waive the requirement for NRC approval. In all three situations, after a matter (e.g., an exemption in the case of paragraph VI.B.4) is addressed for a specific plant referencing a design certification rule, the adequacy of that matter *for that plant* is resolved and would constitute part of the licensing basis for that plant. Therefore, that matter would not ordinarily be subject to challenge in any subsequent proceeding or action for that plant (e.g., an enforcement action) listed in the introductory portion of paragraph IV.B. By contrast, there would be no legally binding issue resolution on that subject matter *for any other plant*, or in a subsequent rulemaking amending the applicable design certification rule. However, the NRC's consideration of the safety, regulatory or policy issues necessary to the determination of the exemption or license amendment may, in appropriate circumstances, be relied upon as part of the basis for NRC action in other licensing proceedings or rulemaking.

Paragraph VI.B.7 would provide that, for those plants located on sites whose site characteristics do not exceed the site parameters assumed in the **NAME OF VENDOR** evaluation of SAMDAs, all issues with respect to SAMDAs arising under the National Environmental Policy Act of 1969, as amended (NEPA), associated with the information in the environmental assessment for this design and the information regarding SAMDAs in **Appendix X** of the generic DCD are also resolved within the meaning and intent of 10 CFR 52.63(a)(5). If an exemption from a site parameter is granted, the exemption applicant has the initial burden of demonstrating that the original SAMDA analysis still applies to the actual site characteristics but; if the exemption is approved, requests for litigation at the COL stage must meet the requirements of 10 CFR 2.309 and present sufficient information to create a genuine controversy in order to obtain a hearing on the site parameter exemption.

Paragraph VI.C would reserve the right of the Commission to impose operational requirements on applicants that reference this appendix. This provision would reflect the fact that only some operational requirements, including portions of the generic TS in **Section X.X** of the DCD, and no operational programs, such as operational QA, were completely or comprehensively reviewed by the NRC in this design certification rulemaking proceeding. Therefore, the special backfit and finality provisions of 10 CFR 52.63 would apply only to those operational requirements that either the NRC completely reviewed and approved, or formed the basis for an NRC safety finding of the adequacy of the **NAME OF DESIGN**, as documented in the NRC's safety evaluation report for the **NAME OF DESIGN**. This is consistent with the currently approved design certifications in 10 CFR part 52, appendices A through **X**. Although information on operational matters is included in the DCDs of each of these currently approved designs, for the most part these design certifications do not provide approval for operational information, and none provide approval for operational "programs" (e.g., emergency

preparedness programs, operational quality assurance programs). Most operational information in the DCD simply serves as "contextual information," i.e., information necessary to understand the design of certain SSCs and how they would be used in the overall context of the facility. The NRC did not use contextual information to support the NRC's safety conclusions, and such information do not constitute the underlying safety bases for the adequacy of those SSCs. Thus, contextual operational information on any particular topic would not constitute one of the "matters resolved" under Paragraph VI.B.

The NRC notes that operational requirements may be imposed on licenses referencing this design certification through the inclusion of license conditions in the license, or inclusion of a description of the operational requirement in the plant-specific FSAR². The NRC's choice of the regulatory vehicle for imposing the operational requirements will depend upon, among other things: (i) whether the development and/or implementation of these requirements must occur prior to either the issuance of the combined license or the Commission finding under 10 CFR 52.103(g), and (ii) the nature of the change controls which the NRC believes are appropriate given the regulatory, safety and security significance of each operational requirement.

Paragraph VI.C would allow the NRC to impose future operational requirements (distinct from design matters) on applicants who reference this design certification. Also, license conditions for portions of the plant within the scope of this design certification, e.g., start-up and power ascension testing, are not restricted by 10 CFR 52.63. The requirement to perform these testing programs is contained in Tier 1 information. However, ITAAC cannot be specified for these subjects because the matters to be addressed in these license conditions cannot be verified prior to fuel load and operation, when the ITAAC are satisfied. Therefore, another

² Certain activities, ordinarily conducted following fuel load and therefore considered "operational requirements" but which may be relied upon to support a Commission finding under 10 CFR 52.103(g), may themselves be the subject of ITAAC to ensure their implementation prior to the § 52.103(g) finding.

regulatory vehicle is necessary to ensure that licensees comply with the matters contained in the license conditions. License conditions for these areas cannot be developed now because this requires the type of detailed design information that will be developed during a combined license review. In the absence of detailed design information to evaluate the need for and develop specific post-fuel load verifications for these matters, the Commission is reserving the right to impose license conditions by rule for post-fuel load verification activities for portions of the plant within the scope of this design certification.

Paragraph VI.D would reiterate the restrictions (contained in Section VIII) placed upon the Commission when ordering generic or plant-specific modifications, changes or additions to structures, systems, or components, design features, design criteria, and ITAAC (paragraph VI.D.3 would address ITAAC) within the scope of the certified design.

Paragraph VI.E provides that the NRC would specify at an appropriate time the procedure for an interested member of the public to obtain access to proprietary information for the **NAME OF DESIGN** design which is contained either in the DCD for the **NAME OF DESIGN**, in or secondary references in the DCD containing proprietary information, other than information or references containing SGI or security-related SUNSI. Access to such information would be for the sole purpose of requesting or participating in certain specified hearings, namely, (i) the hearing required by 10 CFR 52.85 where the underlying application references this appendix; (ii) any hearing provided under 10 CFR 52.103 where the underlying combined license references this appendix; and (iii) any other hearing relating to this appendix in which interested persons have the right to request an adjudicatory hearing. Instead, the NRC will specify the procedures to be used at an appropriate time. For both a hearing required by 10 CFR 52.85 where the underlying application references this appendix, the NRC currently expects to follow its current practice of establishing the procedures by order at the time that the notice of hearing is

published in the Federal Register. See, e.g., Calvert Cliffs 3 Nuclear Project, LLC, and Unistar Nuclear Operating Services, LLC Notice of Hearing and Opportunity To Petition for Leave To Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for the Calvert Cliffs Nuclear Power Plant Unit 3 (73 FR 55876, September 26, 2008).

G. Duration of this Appendix (Section VII)

The purpose of Section VII would be, in part, to specify the period during which this design certification may be referenced by an applicant for a COL, under 10 CFR 52.55. This section would also state that the design certification would remain valid for an applicant or licensee that references the design certification until the application is withdrawn or the license expires. Therefore, if an application references this design certification during the 15-year period, then the design certification would be effective until the application is withdrawn or the license issued on that application expires. Also, the design certification would be effective for the referencing licensee if the license is renewed. The Commission intends for this appendix to remain valid for the life of the plant that references the design certification to achieve the benefits of standardization and licensing stability. This means that changes to, or plant-specific departures from, information in the plant-specific DCD must be made under the change processes in Section VIII for the life of the plant.

H. Processes for Changes and Departures (Section VIII)

The purpose of Section VIII would be to set forth the processes for generic changes to, or plant-specific departures (including exemptions) from, the DCD. The Commission adopted this restrictive change process in order to achieve a more stable licensing process for applicants

and licensees that reference this DCR. Section VIII is divided into three paragraphs, which correspond to Tier 1, Tier 2, and operational requirements. The language of Section VIII distinguishes between generic *changes to* the DCD versus plant-specific *departures from* the DCD. Generic *changes* must be accomplished by rulemaking because the intended subject of the change is this DCR itself, as is contemplated by 10 CFR 52.63(a)(1). Consistent with 10 CFR 52.63(a)(3), any generic rulemaking changes are applicable to all plants, absent circumstances which render the change [“modification” in the language of 10 CFR 52.63(a)(3)] “technically irrelevant.” By contrast, plant-specific *departures* could be either a Commission-issued order to one or more applicants or licensees; or an applicant or licensee-initiated departure applicable only to that applicant’s or licensee’s plant(s), similar to a 10 CFR 50.59 departure or an exemption. Because these plant-specific departures will result in a DCD that is unique for that plant, Section X would require an applicant or licensee to maintain a plant-specific DCD. For purposes of brevity, this discussion refers to both generic changes and plant-specific departures as “change processes.”

Section VIII refers to an exemption from one or more requirements of this appendix and the criteria for granting an exemption. The Commission cautions that when the exemption involves an underlying substantive requirement (applicable regulation), then the applicant or licensee requesting the exemption must also show that an exemption from the underlying applicable requirement meets the criteria of 10 CFR 52.7.

Tier 1 information

The change processes for Tier 1 information would be covered in paragraph VIII.A. Generic changes to Tier 1 are accomplished by rulemakings that amend the generic DCD and are governed by the standards in 10 CFR 52.63(a)(1) and 10 CFR 52.63(a)(2). No matter who proposes it, a generic change under § 52.63(a)(1) will not be made to a certified design while it

is in effect unless the change: (1) is necessary for compliance with Commission regulations applicable and in effect at the time the certification was issued; (2) is necessary to provide adequate protection of the public health and safety or common defense and security; (3) reduces unnecessary regulatory burden and maintains protection to public health and safety and common defense and security; (4) provides the detailed design information necessary to resolve selected design acceptance criteria; (5) corrects material errors in the certification information; (6) substantially increases overall safety, reliability, or security of a facility and the costs of the change are justified; or (7) contributes to increased standardization of the certification information. The rulemakings must provide for notice and opportunity for public comment on the proposed change, as required by 10 CFR 52.63(a)(2), and the Commission will give consideration to whether the benefits justify the costs for plants that are already licensed or for which an application for a permit or license is under consideration.

Departures from Tier 1 may occur in two ways: (1) the Commission may *order* a licensee to depart from Tier 1, as provided in paragraph VIII.A.3; or (2) an applicant or licensee may request an *exemption* from Tier 1, as provided in paragraph VIII.A.4. If the Commission seeks to order a licensee to depart from Tier 1, paragraph VIII.A.3 would require that the Commission find both that the departure is necessary for adequate protection or for compliance and that special circumstances are present. Paragraph VIII.A.4 would provide that exemptions from Tier 1 requested by an applicant or licensee are governed by the requirements of 10 CFR 52.63(b)(1) and 52.98(f), which provide an opportunity for a hearing. In addition, the Commission would not grant requests for exemptions that may result in a significant decrease in the level of safety otherwise provided by the design.

Tier 2 information

The change processes for the three different categories of Tier 2 information, namely, Tier 2, Tier 2*, and Tier 2* with a time of expiration, would be set forth in paragraph VIII.B. The change process for Tier 2 has the same elements as the Tier 1 change process, but some of the standards for plant-specific orders and exemptions would be different.

The process for generic Tier 2 changes (including changes to Tier 2* and Tier 2* with a time of expiration) tracks the process for generic Tier 1 changes. As set forth in paragraph VIII.B.1, generic Tier 2 changes would be accomplished by rulemaking amending the generic DCD and would be governed by the standards in 10 CFR 52.63(a)(1). No matter who proposes it, a generic change under § 52.63(a)(1) will not be made to a certified design while it is in effect unless the change: (1) is necessary for compliance with Commission regulations applicable and in effect at the time the certification was issued; (2) is necessary to provide adequate protection of the public health and safety or common defense and security; (3) reduces unnecessary regulatory burden and maintains protection to public health and safety and common defense and security; (4) provides the detailed design information necessary to resolve selected design acceptance criteria; (5) corrects material errors in the certification information; (6) substantially increases overall safety, reliability, or security of a facility and the costs of the change are justified; or (7) contributes to increased standardization of the certification information. If a generic change is made to Tier 2* information, then the category and expiration, if necessary, of the new information would also be determined in the rulemaking and the appropriate change process for that new information would apply.

Departures from Tier 2 would occur in five ways: (1) the Commission may order a plant-specific departure, as set forth in paragraph VIII.B.3; (2) an applicant or licensee may request an exemption from a Tier 2 requirement as set forth in paragraph VIII.B.4; (3) a licensee

may make a departure without prior NRC approval under paragraph VIII.B.5 [similar to the process in 10 CFR 50.59]; (4) the licensee may request NRC approval for proposed departures which do not meet the requirements in paragraph VIII.B.5 as provided in paragraph VIII.B.5.d; and (5) the licensee may request NRC approval for a departure from Tier 2* information under paragraph VIII.B.6.

Similar to Commission-ordered Tier 1 departures and generic Tier 2 changes, Commission-ordered Tier 2 departures could not be imposed except when necessary either to bring the certification into compliance with the Commission's regulations applicable and in effect at the time of approval of the design certification or to ensure adequate protection of the public health and safety or common defense and security, as set forth in paragraph VIII.B.3. However, the special circumstances for the Commission-ordered Tier 2 departures would not have to outweigh any decrease in safety that may result from the reduction in standardization caused by the plant-specific order, as required by 10 CFR 52.63(a)(4). The Commission determined that it was not necessary to impose an additional limitation similar to that imposed on Tier 1 departures by 10 CFR 52.63(a)(4) and (b)(1). This type of additional limitation for standardization would unnecessarily restrict the flexibility of applicants and licensees with respect to Tier 2 information.

An applicant or licensee would be permitted to request an exemption from Tier 2 information as set forth in paragraph VIII.B.4. The applicant or licensee would have to demonstrate that the exemption complies with one of the special circumstances in 10 CFR 50.12(a). In addition, the Commission would not grant requests for exemptions that may result in a significant decrease in the level of safety otherwise provided by the design. However, the special circumstances for the exemption do not have to outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption. If the exemption is requested by an applicant for a license, the exemption would be subject to litigation

in the same manner as other issues in the license hearing, consistent with 10 CFR 52.63(b)(1). If the exemption is requested by a licensee, then the exemption would be subject to litigation in the same manner as a license amendment.

Paragraph VIII.B.5 would allow an applicant or licensee to depart from Tier 2 information, without prior NRC approval, if the proposed departure does not involve a change to, or departure from, Tier 1 or Tier 2* information, TS, or does not require a license amendment under paragraphs VIII.B.5.b or VIII.B.5.c. The TS referred to in VIII.B.5.a of this paragraph are the TS in **Section X.X** of the generic DCD, including bases, for departures made prior to issuance of the COL. After issuance of the COL, the plant-specific TS would be controlling under paragraph VIII.B.5. The bases for the plant-specific TS would be controlled by the bases control program, which is specified in the plant-specific TS administrative controls section. The requirement for a license amendment in paragraph VIII.B.5.b would be similar to the requirement in 10 CFR 50.59 and apply to all information in Tier 2 except for the information that resolves the severe accident issues.

The Commission believes that the resolution of ex-vessel severe accident design features should be preserved and maintained in the same fashion as all other safety issues that were resolved during the design certification review (refer to SRM on SECY-90-377, "Requirements for Design Certification Under 10 CFR Part 52," dated February 15, 1991, ADAMS accession number ML003707892). However, because of the increased uncertainty in ex-vessel severe accident issue resolutions, the Commission has proposed separate criteria in paragraph VIII.B.5.c for determining if a departure from information that resolves ex-vessel severe accident design features would require a license amendment. For purposes of applying the special criteria in paragraph VIII.B.5.c, ex-vessel severe accident resolutions would be limited to design features where the intended function of the design feature is relied upon to

resolve postulated accidents when the reactor core has melted and exited the reactor vessel, and the containment is being challenged. These design features are identified in **Section X.X and Appendix X** of the DCD, with other issues, and are described in other sections of the DCD. Therefore, the location of design information in the DCD is not important to the application of this special procedure for ex-vessel severe accident design features. However, the special procedure in paragraph VIII.B.5.c would not apply to design features that resolve so-called “beyond design-basis accidents” or other low-probability events. The important aspect of this special procedure is that it would be limited to ex-vessel severe accident design features, as defined above. Some design features may have intended functions to meet “design basis” requirements and to resolve “severe accidents.” If these design features are reviewed under paragraph VIII.B.5, then the appropriate criteria from either paragraphs VIII.B.5.b or VIII.B.5.c would be selected depending upon the function being changed.

An applicant or licensee that plans to depart from Tier 2 information, under paragraph VIII.B.5, would be required to prepare an evaluation which provides the bases for the determination that the proposed change does not require a license amendment or involve a change to Tier 1 or Tier 2* information, or a change to the TS, as explained above. In order to achieve the Commission’s goals for design certification, the evaluation would need to consider all of the matters that were resolved in the DCD, such as generic issue resolutions that are relevant to the proposed departure. The benefits of the early resolution of safety issues would be lost if departures from the DCD were made that violated these resolutions without appropriate review.

The evaluation of the relevant matters would need to consider the proposed departure over the full range of power operation from startup to shutdown, as it relates to anticipated operational occurrences, transients, design-basis accidents, and severe accidents. The

evaluation would also have to include a review of all relevant secondary references from the DCD because Tier 2 information, which is intended to be treated as a requirement, would be contained in the secondary references. The evaluation should consider **Tables 14.3-1 through 14.3-8 and 19.59-18** of the generic DCD to ensure that the proposed change does not impact Tier 1 information. These tables contain cross-references from the safety analyses and probabilistic risk assessment in Tier 2 to the important parameters that were included in Tier 1.

Paragraph VIII.B.5.d addresses information described in the DCD to address aircraft impacts, in accordance with 10 CFR 52.47(a)(28). Under 10 CFR 52.47(a)(28), applicants are required to include the information required by 10 CFR 50.150(b) in their DCD. Under 10 CFR 50.150(b), applications for standard design certifications are required to include:

1. A description of the design features and functional capabilities identified as a result of the aircraft impact assessment required by 10 CFR 50.150(a)(1); and
2. A description of how such design features and functional capabilities meet the assessment requirements in 10 CFR 50.150(a)(1).

An applicant or licensee who changes this information is required to consider the effect of the changed design feature or functional capability on the original aircraft impact assessment required by 10 CFR 50.150(a). The applicant or licensee is also required to describe in the plant-specific DCD how the modified design features and functional capabilities continue to meet the assessment requirements in 10 CFR 50.150(a)(1). Submittal of this updated information is governed by the reporting requirements in Section X.B.

A party to an adjudicatory proceeding (e.g., for issuance of a COL) who believes that an applicant or licensee has not complied with paragraph VIII.B.5 when departing from Tier 2 information, would be permitted to petition to admit such a contention into the proceeding under paragraph VIII.B.5.f. This provision has been proposed because an incorrect departure from the

requirements of this appendix essentially would place the departure outside of the scope of the Commission's safety finding in the design certification rulemaking. Therefore, it follows that properly founded contentions alleging such incorrectly implemented departures cannot be considered "resolved" by this rulemaking. As set forth in paragraph VIII.B.5.f, the petition would have to comply with the requirements of 10 CFR 2.309 and show that the departure does not comply with paragraph VIII.B.5. Any other party would be allowed to file a response to the petition. If on the basis of the petition and any responses, the presiding officer in the proceeding determines that the required showing has been made, the matter would be certified to the Commission for its final determination. In the absence of a proceeding, petitions alleging nonconformance with paragraph VIII.B.5 requirements applicable to Tier 2 departures would be treated as petitions for enforcement action under 10 CFR 2.206.

Paragraph VIII.B.6 would provide a process for departing from Tier 2* information. The creation of and restrictions on changing Tier 2* information resulted from the development of the Tier 1 information for the ABWR design certification (Appendix A to 10 CFR part 52) and the System 80+ design certification (Appendix B to 10 CFR part 52). During this development process, these applicants requested that the amount of information in Tier 1 be minimized to provide additional flexibility for an applicant or licensee who references these appendices. Also, many codes, standards, and design processes, which would not be specified in Tier 1 that are acceptable for meeting ITAAC, were specified in Tier 2. The result of these departures would be that certain significant information only exists in Tier 2 and the Commission would not want this significant information to be changed without prior NRC approval. This Tier 2* information would be identified in the generic DCD with italicized text and brackets (See **Table 1-1** of **NAME OF DESIGN DCD Introduction**).

Although the Tier 2* designation was originally intended to last for the lifetime of the facility, like Tier 1 information, the NRC determined that some of the Tier 2* information could expire when the plant first achieves full (100 percent) 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 facility. The factors determining whether Tier 2* information could expire after full power is first achieved (first full power) were whether the Tier 1 information would govern these areas after first full power and the NRC's determination that prior approval was required before implementation of the change due to the significance of the information. Therefore, certain Tier 2* information listed in paragraph VIII.B.6.c would cease to retain its Tier 2* designation after full-power operation is first achieved following the Commission finding under 10 CFR 52.103(g). Thereafter, that information would be deemed to be Tier 2 information that would be subject to the departure requirements in paragraph VIII.B.5. By contrast, the Tier 2* information identified in paragraph VIII.B.6.b would retain its Tier 2* designation throughout the duration of the license, including any period of license renewal.

NOTE: THIS PARAGRAPH IS AP1000-SPECIFIC; VERIFY IF IT APPLIES TO YOUR DESIGN – IF NOT THEN DELETE IT. Certain preoperational tests in paragraph VIII.B.6.c would be designated to be performed only for the first plant or first three plants that reference this appendix. NAME OF VENDOR's basis for performing these "first-plant-only" and "first-three-plants-only" preoperational tests is provided in Section 14.2.5 of the DCD. The NRC found NAME OF VENDOR's basis for performing these tests and its justification for only performing the tests on the first plant or first three plants acceptable. The NRC's decision was based on the need to verify that plant-specific manufacturing and/or construction variations do not adversely impact the predicted performance of certain passive safety systems, while recognizing that these special tests would result in significant thermal transients being applied to critical plant

components. The NRC believes that the range of manufacturing or construction variations that could adversely affect the relevant passive safety systems would be adequately disclosed after performing the designated tests on the first plant, or the first three plants, as applicable. The COL action item in Section 14.4.6 of the DCD states that subsequent plants shall either perform these preoperational tests or justify that the results of the first-plant-only or first-three-plant-only tests are applicable to the subsequent plant. The Tier 2* designation for these tests would expire after the first plant or first three plants complete these tests, as indicated in paragraph VIII.B.6.c.

If Tier 2* information is changed in a generic rulemaking, the designation of the new information (Tier 1, 2*, or 2) would also be determined in the rulemaking and the appropriate process for future changes would apply. If a plant-specific departure is made from Tier 2* information, then the new designation would apply only to that plant. If an applicant who references this design certification makes a departure from Tier 2* information, the new information would be subject to litigation in the same manner as other plant-specific issues in the licensing hearing. If a licensee makes a departure from Tier 2* information, it would be treated as a license amendment under 10 CFR 50.90 and the finality would be determined under paragraph VI.B.5. Any requests for departures from Tier 2* information that affects Tier 1 would also have to comply with the requirements in paragraph VIII.A.

Operational Requirements

The change process for TS and other operational requirements in the DCD would be set forth in paragraph VIII.C. This change process has elements similar to the Tier 1 and Tier 2 change processes in paragraphs VIII.A and VIII.B, but with significantly different change standards. Because of the different finality status for TS and other operational requirements (refer to paragraph IV.F of this document), the Commission designated a special category of

information, consisting of the TS and other operational requirements, with its own change process in proposed paragraph VIII.C. The key to using the change processes proposed in Section VIII is to determine if the proposed change or departure would require a change to a design feature described in the generic DCD. If a design change is required, then the appropriate change process in paragraph VIII.A or VIII.B would apply. However, if a proposed change to the TS or other operational requirements does not require a change to a design feature in the generic DCD, then paragraph VIII.C would apply. The language in paragraph VIII.C would also distinguish between generic (Section X.X of the DCD) and plant-specific TS to account for the different treatment and finality accorded TS before and after a license is issued.

The process in paragraph VIII.C.1 for making generic changes to the generic TS in Section X.X of the DCD or other operational requirements in the generic DCD would be accomplished by rulemaking and governed by the backfit standards in 10 CFR 50.109. The determination of whether the generic TS and other operational requirements were completely reviewed and approved in the design certification rulemaking would be based upon the extent to which the NRC reached a safety conclusion in the FSER on this matter. If it cannot be determined, in the absence of a specific statement, that the TS or operational requirement was comprehensively reviewed and finalized in the design certification rulemaking, then there would be no backfit restriction under 10 CFR 50.109 because no prior position, consistent with paragraph VI.B, was taken on this safety matter. Generic changes made under paragraph VIII.C.1 would be applicable to all applicants or licensees (refer to paragraph VIII.C.2), unless the change is irrelevant because of a plant-specific departure.

Some generic TS and investment protection short-term availability controls contain values in brackets []. The brackets are placeholders indicating that the NRC's review is not complete, and represent a requirement that the applicant for a combined license referencing the

NAME OF DESIGN DCR must replace the values in brackets with final plant-specific values (refer to guidance provided in Interim Staff Guidance DC/COL-ISG-8, “Necessary Content of Plant-Specific Technical Specifications”). The values in brackets are neither part of the design certification rule nor are they binding. Therefore, the replacement of bracketed values with final plant-specific values does not require an exemption from the generic TS **or investment protection short-term availability controls**.

Plant-specific departures may occur by either a Commission order under paragraph VIII.C.3 or an applicant’s exemption request under paragraph VIII.C.4. The basis for determining if the TS or operational requirement was completely reviewed and approved for these processes would be the same as for paragraph VIII.C.1 above. If the TS or operational requirement is comprehensively reviewed and finalized in the design certification rulemaking, then the Commission must demonstrate that special circumstances are present before ordering a plant-specific departure. If not, there would be no restriction on plant-specific changes to the TS or operational requirements, prior to the issuance of a license, provided a design change is not required. Although the generic TS were reviewed and approved by the NRC staff in support of the design certification review, the Commission intends to consider the lessons learned from subsequent operating experience during its licensing review of the plant-specific TS. The process for petitioning to intervene on a TS or operational requirement contained in paragraph VIII.C.5 would be similar to other issues in a licensing hearing, except that the petitioner must also demonstrate why special circumstances are present.

Finally, the generic TS would have no further effect on the plant-specific TS after the issuance of a license that references this appendix. The bases for the generic TS would be controlled by the change process in paragraph VIII.C. After a license is issued, the bases would

be controlled by the bases change provision set forth in the administrative controls section of the plant-specific TS.

I. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) (Section IX)

This section is reserved for future use.

J. Records and Reporting (Section X)

The purpose of Section X would be to set forth the requirements that would apply to maintaining records of changes to and departures from the generic DCD, which would be reflected in the plant-specific DCD. Section X would also set forth the requirements for submitting reports (including updates to the plant-specific DCD) to the NRC. This section of the appendix would be similar to the requirements for records and reports in 10 CFR part 50, except for minor differences in information collection and reporting requirements.

Paragraph X.A.1 would require that a generic DCD and the proprietary and safeguards information referenced in the generic DCD be maintained by the applicant for this rule. The generic DCD concept was developed, in part, to meet the Office of Federal Register (OFR) requirements for incorporation by reference, including public availability of documents incorporated by reference. However, the proprietary and safeguards information could not be included in the generic DCD because they are not publicly available. Nonetheless, the proprietary and safeguards information was reviewed by the NRC and, as stated in paragraph VI.B.2, the NRC would consider the information to be resolved within the meaning of 10 CFR 52.63(a)(5). Because this information is not in the generic DCD, this proprietary and safeguards information, or its equivalent, is required to be provided by an applicant for a license referencing this design certification rule. Paragraph X.A.1 would require the design certification applicant to

maintain the proprietary and safeguards information which it developed and used to support its design certification application. This would ensure that the referencing applicant has direct access to this information from the design certification applicant, if it has contracted with the applicant to provide the proprietary and safeguards information to support its license application. The NRC may also inspect this proprietary and safeguards information if this information was not submitted to the NRC, e.g., the aircraft impact assessment required by 10 CFR 50.150. Only the generic DCD would be identified and incorporated by reference into this rule. The generic DCD and the NRC-approved version of the proprietary and safeguards information would be maintained for the period of time that this appendix may be referenced.

Paragraphs X.A.2 and X.A.3 would place recordkeeping requirements on the applicant or licensee that references this design certification so that its plant-specific DCD accurately reflects both generic changes to the generic DCD and plant-specific departures made under Section VIII. The term “plant-specific” would be used in paragraph X.A.2 and other sections of this appendix to distinguish between the generic DCD that would be incorporated by reference into this appendix, and the plant-specific DCD that the applicant would be required to submit under paragraph IV.A. The requirement to maintain changes to the generic DCD would be explicitly stated to ensure that these changes are not only reflected in the generic DCD, which would be maintained by the applicant for design certification, but also in the plant-specific DCD. Therefore, records of generic changes to the DCD would be required to be maintained by both entities to ensure that both entities have up-to-date DCDs.

Paragraph X.A would not place recordkeeping requirements on site-specific information that is outside the scope of this rule. As discussed in paragraph IV.D of this document, the FSAR required by 10 CFR 52.79 would contain the plant-specific DCD and the site-specific information for a facility that references this rule. The phrase “site-specific portion of the final

safety analysis report” in paragraph X.B.3.c would refer to the information that is contained in the FSAR for a facility (required by 10 CFR 52.79) but is not part of the plant-specific DCD (required by paragraph IV.A). Therefore, this rule would not require that duplicate documentation be maintained by an applicant or licensee that references this rule, because the plant-specific DCD would be part of the FSAR for the facility.

Paragraph X.B.1 would require applicants or licensees that reference this rule to submit reports, which describe departures from the DCD and include a summary of the written evaluations. The requirement for the written evaluations would be set forth in paragraph X.A.1. The frequency of the report submittals would be set forth in paragraph X.B.3. The requirement for submitting a summary of the evaluations would be similar to the requirement in 10 CFR 50.59(d)(2).

Paragraph X.B.2 would require applicants or licensees that reference this rule to submit updates to the DCD, which include both generic changes and plant-specific departures. The frequency for submitting updates would be set forth in paragraph X.B.3. The requirements in paragraph X.B.3 for submitting the reports and updates would vary according to certain time periods during a facility’s lifetime. If a potential applicant for a combined license who references this rule decides to depart from the generic DCD prior to submission of the application, then paragraph X.B.3.a would require that the updated DCD be submitted as part of the initial application for a license. Under paragraph X.B.3.b, the applicant may submit any subsequent updates to its plant-specific DCD along with its amendments to the application provided that the submittals are made at least once per year. Because amendments to an application are typically made more frequently than once a year, this should not be an excessive burden on the applicant.

Paragraph X.B.3.b would also require semi-annual submission of the reports required by paragraph X.B.1 throughout the period of application review and construction. The NRC would use the information in the reports to help plan the NRC's inspection and oversight during this phase, when the licensee is conducting detailed design, procurement of components and equipment, construction, and preoperational testing. In addition, the NRC would use the information in making its finding on ITAAC under § 52.103(g), as well as any finding on interim operation under Section 189.a.(1)(B)(iii) of the AEA. Once a facility begins operation (for a combined license under 10 CFR Part 52, after the Commission has made a finding under § 52.103(g)), the frequency of reporting would be governed by the requirements in paragraph X.B.3.c.

Paragraph X.B.4 would require that an applicant for an amendment to the rule submit a revised, final generic DCD to the NRC. The NRC must, in turn, provide the DCD to OFR in order to meet OFR requirements for incorporation by reference.

V. Agreement State Compatibility

Under the "Policy Statement on Adequacy and Compatibility of Agreement States Programs," approved by the Commission on June 20, 1997, and published in the *Federal Register* (62 FR 46517; September 3, 1997), this rule is classified as compatibility "NRC." Compatibility is not required for Category "NRC" regulations. The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the AEA or the provisions of this chapter. Although an Agreement State may not adopt program elements reserved to the NRC, it may wish to inform its licensees of certain requirements by a mechanism that is consistent with the particular State's administrative procedure laws. Category "NRC" regulations do not confer regulatory authority on the State.

VI. Availability of Documents

The NRC is making the documents identified below available to interested persons through one or more of the following methods, as indicated.

Public Document Room (PDR). The NRC PDR is located at 11555 Rockville Pike, Rockville, Maryland 20852, e-mail pdr.resource@nrc.gov.

Regulations.gov (Web). These documents may be viewed and downloaded electronically through the Federal eRulemaking Portal <http://www.regulations.gov>, Docket number NRC-20XX-XXXX.

NRC's Electronic Reading Room (ERR). The NRC's public electronic reading room is located at <http://www.nrc.gov/reading-rm.html>.

Document	PDR	Web	ERR (ADAMS)
SECY-XX-XXXX, "Proposed Rule - NAME OF DESIGN Design Certification"	x	x	MLXXXXXXXXXX
NAME OF DESIGN Environmental Assessment	x	x	MLXXXXXXXXXX
NAME OF DESIGN Design Control Document, Revision X	x	MLXXXXXXXXXX
NAME OF DESIGN Final Safety Evaluation Report (NUREG-XXXX)	x	MLXXXXXXXXXX
Regulatory History of Design Certification ³	x	ML003761550

VII. Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Preparation of Comments on the proposed NAME OF DESIGN

Design Certification Rule

TBD - UNDER DEVELOPMENT BY OGC

³ The regulatory history of the NRC's design certification reviews is a package of documents that is available in NRC's PDR and ERR. This history spans the period during which the NRC simultaneously developed the regulatory standards for reviewing these designs and the form and content of the rules that certified the designs.

VIII. Plain Language

The Presidential memorandum "Plain Language in Government Writing" published on June 10, 1998 (63 FR 31883), directed that the Government's documents be in clear and accessible language. The NRC requests comments on the proposed rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the NRC as explained in the ADDRESSES heading of this document.

IX. Voluntary Consensus Standards

The National Technology and Transfer Act of 1995 (Act), Public Law 104-113, requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless using such a standard is inconsistent with applicable law or is otherwise impractical. In this proposed rule, the NRC proposes to approve the **NAME OF DESIGN** standard plant design for use in nuclear power plant licensing under 10 CFR part 50 or 52. Design certifications are not generic rulemakings establishing a generally applicable standard with which all parts 50 and 52 nuclear power plant licensees must comply. Design certifications are Commission approvals of specific nuclear power plant designs by rulemaking. Furthermore, design certifications are initiated by an applicant for rulemaking, rather than by the NRC. For these reasons, the NRC concludes that the Act does not apply to this proposed rule.

X. Finding of No Significant Environmental Impact: Availability

The Commission has determined under NEPA, and the Commission's regulations in Subpart A, "National Environmental Policy Act; Regulations Implementing Section 102(2)," of 10 CFR part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," that this proposed design certification rule, if adopted, would not be a

major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement (EIS) is not required. The basis for this determination, as documented in the environmental assessment (EA), is that this amendment to 10 CFR part 52 would not authorize the siting, construction, or operation of a facility using the **NAME OF DESIGN** design; it would only codify the **NAME OF DESIGN** design in a rule. The NRC will evaluate the environmental impacts and issue an EIS as appropriate under NEPA as part of the application for the construction and operation of a facility referencing the **NAME OF DESIGN** design certification rule.

In addition, as part of the environmental assessment for the **NAME OF DESIGN** design, the NRC reviewed **NAME OF VENDOR**'s evaluation of various design alternatives to prevent and mitigate severe accidents in **Appendix 1B** of the **NAME OF DESIGN** DCD Tier 2. Based upon review of **NAME OF VENDOR**'s evaluation, the Commission finds that: (1) **NAME OF VENDOR** identified a reasonably complete set of potential design alternatives to prevent and mitigate severe accidents for the **NAME OF DESIGN** design; (2) **SELECT ONE: none of the potential design alternatives are justified on the basis of cost-benefit considerations OR any cost-effective design alternative was incorporated in the design by NAME OF VENDOR**; and (3) it is unlikely that other design changes would be identified and justified during the term of the design certification on the basis of cost-benefit considerations, because **the estimated core damage frequencies for the NAME OF DESIGN are very low on an absolute scale**. These issues are considered resolved for the **NAME OF DESIGN** design.

The EA, upon which the Commission's finding of no significant impact is based, and the **NAME OF DESIGN** DCD are available for examination and copying at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852. The

NRC has sent a copy of the EA and this proposed rule to every State Liaison Officer and requests their comments on the EA.

XI. Paperwork Reduction Act Statement

NOTE: THE FOLLOWING PRA STATEMENT ASSUMES WE HAVE OMB APPROVAL OF THE BURDEN FOR THE NEW DC RULES INCLUDED IN THE SUPPORTING STATEMENT RENEWAL. THE PM MUST VERIFY OMB APPROVAL HAS BEEN RECEIVED. IF NOT, REFER TO OIS WEBSITE FOR THE APPROPRIATE PRA STATEMENT WHERE OMB APPROVAL IS REQUIRED. This proposed rule contains new or amended information collection (IC) requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, *et seq*). Although the proposed rule contains detailed IC requirements, the NRC has determined that the IC burden from these requirements is already accounted for under the general requirements in 10 CFR Part 52). Because there would be no change in IC burden for this proposed rule, Office of Management and Budget (OMB) clearance is not required. Existing requirements were approved by the Office of Management and Budget, approval number 3150-0151.

Abstract: The NRC proposes to amend its regulations to certify the **NAME OF DESIGN** standard plant design under Subpart B of 10 CFR part 52. This action is necessary so that applicants or licensees intending to construct and operate a **NAME OF DESIGN** design may do so by referencing this DCR. The applicant for certification of the **NAME OF DESIGN** design is **NAME OF VENDOR**.

The NRC is seeking public comment on whether the determination of no change in IC burden for this proposed rule is appropriate.

Send comments on any aspect of these proposed information collections, including suggestions for reducing the burden and on the above issues, by **[INSERT DATE 30 DAYS**

AFTER PUBLICATION IN THE FEDERAL REGISTER] to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to INFOCOLLECTS.RESOURCE@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0151), Office of Management and Budget, Washington, DC 20503. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

XII. Regulatory Analysis

The NRC has not prepared a regulatory analysis for this proposed rule. The NRC prepares regulatory analyses for rulemakings that establish generic regulatory requirements applicable to all licensees. Design certifications are not generic rulemakings in the sense that design certifications do not establish standards or requirements with which all licensees must comply. Rather, design certifications are Commission approvals of specific nuclear power plant designs by rulemaking, which then may be voluntarily referenced by applicants for COLs. Furthermore, design certification rulemakings are initiated by an applicant for a design certification, rather than the NRC. Preparation of a regulatory analysis in this circumstance would not be useful because the design to be certified is proposed by the applicant rather than

the NRC. For these reasons, the Commission concludes that preparation of a regulatory analysis is neither required nor appropriate.

XIII. Regulatory Flexibility Certification

Under the Regulatory Flexibility Act (5 U.S.C. 605(b)), the Commission certifies that this rule would not, if promulgated, have a significant economic impact on a substantial number of small entities. This proposed rule provides for certification of a nuclear power plant design. Neither the design certification applicant, nor prospective nuclear power plant licensees who reference this design certification rule, fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act, or the size standards set established by the NRC (10 CFR 2.810). Thus, this rule does not fall within the purview of the Regulatory Flexibility Act.

XIV. Backfitting

The Commission has determined that this proposed rule does not constitute a backfit as defined in the backfit rule (10 CFR 50.109) because this design certification does not impose new or changed requirements on existing 10 CFR part 50 licensees, nor does it impose new or changed requirements on existing DCRs in appendices A through X of part 52. Therefore, a backfit analysis was not prepared for this rule.

List of Subjects in 10 CFR Part 52

Administrative practice and procedure, Antitrust, Backfitting, Combined license, Early site permit, Emergency planning, Fees, Inspection, Limited work authorization, Nuclear power plants and reactors, Probabilistic risk assessment, Prototype, Reactor siting criteria, Redress of site, Reporting and recordkeeping requirements, Standard design, Standard design certification.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552; the NRC is proposing to adopt the following amendments to 10 CFR part 52.

**PART 52 – LICENSES, CERTIFICATIONS, AND APPROVALS FOR NUCLEAR POWER
PLANTS**

1. The authority citation for 10 CFR part 52 continues to read as follows:

AUTHORITY: Secs. 103, 104, 161, 182, 183, 186, 189, 68 Stat. 936, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2133, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, 202, 206, 88 Stat. 1242, 1244, 1246, as amended (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 594 (2005), secs. 147 and 149 of the Atomic Energy Act.

2. In § 52.11, paragraph (b) is revised to read as follows:

§ 52.11 Information collection requirements: OMB approval.

* * * * *

(b) The approved information collection requirements contained in this part appear in §§ 52.7, 52.15, 52.16, 52.17, 52.29, 52.35, 52.39, 52.45, 52.46, 52.47, 52.57, 52.63, 52.75, 52.77, 52.79, 52.80, 52.93, 52.99, 52.110, 52.135, 52.136, 52.137, 52.155, 52.156, 52.157, 52.158, 52.171, 52.177, and appendices A, B, C, D, X, and N of part 52.

3. A new Appendix X to 10 CFR part 52 is added to read as follows:

Appendix X to Part 52—Design Certification Rule for the NAME OF DESIGN Design

I. Introduction

Appendix X constitutes the standard design certification for the NAME OF DESIGN⁴ design, in accordance with 10 CFR part 52, subpart B. The applicant for certification of the NAME OF DESIGN design is NAME OF VENDOR.

II. Definitions

A. *Generic design control document (generic DCD)* means the document containing the Tier 1 and Tier 2 information and generic technical specifications that is incorporated by reference into this appendix. FOR DESIGNS USING "FSAR" INSTEAD OF "DCD", INSERT THE FOLLOWING SENTENCE: For this design, the applicant refers to this document as the NAME OF DESIGN Final Safety Analysis Report (FSAR).

B. *Generic technical specifications (generic TS)* means the information required by 10 CFR 50.36 and 50.36a for the portion of the plant that is within the scope of this appendix.

C. *Plant-specific DCD* means that portion of the combined license FSAR that sets forth both the generic DCD information and any plant-specific changes to generic DCD information.

D. *Tier 1* means the portion of the design-related information contained in the generic DCD that is approved and certified by this appendix (Tier 1 information). The design descriptions, interface requirements, and site parameters are derived from Tier 2 information.

Tier 1 information includes:

1. Definitions and general provisions;
2. Design descriptions;
3. Inspections, tests, analyses, and acceptance criteria (ITAAC);
4. Significant site parameters; and

⁴NAME OF DESIGN is a trademark of NAME OF VENDOR.

5. Significant interface requirements.

E. *Tier 2* means the portion of the design-related information contained in the generic DCD that is approved but not certified by this appendix (Tier 2 information). Compliance with Tier 2 is required, but generic changes to and plant-specific departures from Tier 2 are governed by Section VIII of this appendix. Compliance with Tier 2 provides a sufficient, but not the only acceptable, method for complying with Tier 1. Compliance methods differing from Tier 2 must satisfy the change process in Section VIII of this appendix. Regardless of these differences, an applicant or licensee must meet the requirement in paragraph III.B to reference Tier 2 when referencing Tier 1. Tier 2 information includes:

1. Information required by §§ 52.47(a) and 52.47(c), with the exception of generic TS and conceptual design information;

2. Supporting information on the inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met; **and**

3. COL action items (COL license information), which identify certain matters that must be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references this appendix. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR; **and [IF APPLICABLE]**

4. The investment protection short-term availability controls in Section X.X of the DCD.

F. *Tier 2** means the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in paragraph VIII.B.6 of this appendix. This designation expires for some Tier 2* information under paragraph VIII.B.6 of this appendix.

G. *Departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses* means:

1. Changing any of the elements of the method described in the plant-specific DCD unless the results of the analysis are conservative or essentially the same; or

2. Changing from a method described in the plant-specific DCD to another method unless that method has been approved by the NRC for the intended application.

H. All other terms in this appendix have the meaning set out in 10 CFR 50.2, 10 CFR 52.1, or Section 11 of the Atomic Energy Act of 1954, as amended, as applicable.

III. Scope and Contents

A. Tier 1, Tier 2 (including the investment protection short-term availability controls in Section 16.3), and the generic TS in the NAME OF DESIGN DCD (Revision X, dated DATE) are approved for incorporation by reference into this appendix with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the generic DCD may be obtained from MANAGER'S NAME, MANAGER'S TITLE, NAME OF VENDOR, VENDOR'S ADDRESS. To enforce any revision other than that specified in this appendix, the NRC must publish a notice of change in the *Federal Register* and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. A copy of the generic DCD is also available for examination and copying at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. Copies are available for examination at the NRC Library, Two White Flint North, 11545 Rockville Pike,

Rockville, Maryland, 20852, telephone (301) 415-5610, e-mail LIBRARY@NRC.GOV. The generic DCD can also be viewed at the Federal e-Rulemaking website <http://www.regulations.gov> by searching for documents filed under Docket ID **NRC-20XX-XXXX** or in the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html> by searching under **document number MLXXXXXXXXXX**.

B. An applicant or licensee referencing this appendix, in accordance with Section IV of this appendix, shall incorporate by reference and comply with the requirements of this appendix, including Tier 1, Tier 2 **(including the investment protection short-term availability controls in Section X.X of the DCD)**, and the generic TS except as otherwise provided in this appendix. Conceptual design information in the generic DCD and the evaluation of severe accident mitigation design alternatives in **appendix X** of the generic DCD are not part of this appendix.

C. If there is a conflict between Tier 1 and Tier 2 of the DCD, then Tier 1 controls.

D. If there is a conflict between the generic DCD and either the application for design certification of the **NAME OF DESIGN** design or **NUREG-XXXX**, **"Final Safety Evaluation Report Related to Certification of the NAME OF DESIGN Standard Design,"** (FSER), then the generic DCD controls.

E. Design activities for structures, systems, and components that are wholly outside the scope of this appendix may be performed using site characteristics, provided the design activities do not affect the DCD or conflict with the interface requirements.

IV. 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, 52.79, and 52.80, comply with the following requirements:

1. Incorporate by reference, as part of its application, this appendix.
2. Include, as part of its application:
 - a. A plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD for the **NAME OF DESIGN** design, either by including or incorporating by reference the generic DCD information, and as modified and supplemented by the applicant's exemptions and departures;
 - b. The reports on departures from and updates to the plant-specific DCD required by paragraph X.B of this appendix;
 - c. Plant-specific TS, consisting of the generic and site-specific TS that are required by 10 CFR 50.36 and 50.36a;
 - d. Information demonstrating that the site characteristics fall within the site parameters and that the interface requirements have been met;
 - e. Information that addresses the COL action items; and
 - f. Information required by 10 CFR 52.47(a) that is not within the scope of this appendix.
3. Include, in the plant-specific DCD, the proprietary information and safeguards information referenced in the **NAME OF DESIGN** generic DCD.

B. 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 part 50.

V. Applicable Regulations

A. Except as indicated in paragraph B of this section, the regulations that apply to the **NAME OF DESIGN** design are in 10 CFR parts 20, 50, 73, and 100, codified as of **[insert date final rule was signed]**, that are applicable and technically relevant, as described in the FSER **(NUREG-XXXX)**.

B. The **NAME OF DESIGN** design is exempt from portions of the following regulations:

[USE THE FOLLOWING FORMAT TO LIST ALL REGULATIONS FOR WHICH THE DESIGN IS BEING EXEMPTED:]

1. Paragraph (X)(X)(X) of 10 CFR 50.XX – Section Title

VI. Issue Resolution

A. The Commission has determined that the structures, systems, components, and design features of the **NAME OF DESIGN** design comply with the provisions of the Atomic Energy Act of 1954, as amended, and the applicable regulations identified in Section V of this appendix; and therefore, provide adequate protection to the health and safety of the public. A conclusion that a matter is resolved includes the finding that additional or alternative structures, systems, components, design features, design criteria, testing, analyses, acceptance criteria, or justifications are not necessary for the **NAME OF DESIGN** design.

B. The Commission considers the following matters resolved within the meaning of 10 CFR 52.63(a)(5) in subsequent proceedings for issuance of a COL, amendment of a COL, or renewal of a COL, proceedings held under to 10 CFR 52.103, and enforcement proceedings involving plants referencing this appendix:

1. All nuclear safety issues, except for the generic TS and other operational requirements, associated with the information in the FSER, Tier 1, Tier 2 (including referenced information, which the context indicates is intended as requirements, **and the investment protection short-term availability controls in Section X.X of the DCD**), and the rulemaking record for certification of the **NAME OF DESIGN** design;

2. All nuclear safety and safeguards issues associated with the information in proprietary and safeguards documents, referenced and in context, which are intended as requirements in the generic DCD for the **NAME OF DESIGN** design;

3. All generic changes to the DCD under and in compliance with the change processes in paragraphs VIII.A.1 and VIII.B.1 of this appendix;

4. All exemptions from the DCD under and in compliance with the change processes in paragraphs VIII.A.4 and VIII.B.4 of this appendix, but only for that plant;

5. All departures from the DCD that are approved by license amendment, but only for that plant;

6. Except as provided in paragraph VIII.B.5.f of this appendix, all departures from Tier 2 under and in compliance with the change processes in paragraph VIII.B.5 of this appendix that do not require prior NRC approval, but only for that plant;

7. All environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's EA for the **NAME OF DESIGN** design and **Appendix 1B** of the generic DCD, for plants referencing this appendix whose site characteristics fall within those site parameters specified in the severe accident mitigation design alternatives evaluation.

C. The Commission does not consider operational requirements for an applicant or licensee who references this appendix to be matters resolved within the meaning of 10 CFR 52.63(a)(5). The Commission reserves the right to require operational requirements for an applicant or licensee who references this appendix by rule, regulation, order, or license condition.

D. Except under the change processes in Section VIII of this appendix, the Commission may not require an applicant or licensee who references this appendix to:

1. Modify structures, systems, components, or design features as described in the generic DCD;

2. Provide additional or alternative structures, systems, components, or design features not discussed in the generic DCD; or

3. Provide additional or alternative design criteria, testing, analyses, acceptance criteria, or justification for structures, systems, components, or design features discussed in the generic DCD.

E. The NRC will specify at an appropriate time the procedures to be used by an interested person who wishes to review portions of the design certification or references containing SGI or SUNSI (including proprietary information), for the purpose of participating in the hearing required by 10 CFR 52.85, the hearing provided under 10 CFR 52.103, or in any other hearing relating to this appendix in which interested persons have a right to request an adjudicatory hearing.

VII. Duration of this Appendix

This appendix may be referenced for a period of 15 years from **[insert date 30 days after publication of the final rule in the *Federal Register*]**, except as provided for in 10 CFR 52.55(b) and 52.57(b). This appendix remains valid for an applicant or licensee who references this appendix until the application is withdrawn or the license expires, including any period of extended operation under a renewed license.

VIII. Processes for Changes and Departures

A. Tier 1 information.

1. Generic changes to Tier 1 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 1 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs A.3 or A.4 of this section.

3. Departures from Tier 1 information that are required by the Commission through plant-specific orders are governed by the requirements in 10 CFR 52.63(a)(4).

4. Exemptions from Tier 1 information are governed by the requirements in 10 CFR 52.63(b)(1) and 52.98(f). The Commission will deny a request for an exemption from Tier 1, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design.

B. Tier 2 information.

1. Generic changes to Tier 2 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 2 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs B.3, B.4, B.5, or B.6 of this section.

3. The Commission may not require new requirements on Tier 2 information by plant-specific order while this appendix is in effect under 10 CFR 52.55 or 52.61, unless:

a. A modification is necessary to secure compliance with the Commission's regulations applicable and in effect at the time this appendix was approved, as set forth in Section V of this appendix, or to ensure adequate protection of the public health and safety or the common defense and security; and

b. Special circumstances as defined in 10 CFR 50.12(a) are present.

4. An applicant or licensee who references this appendix may request an exemption from Tier 2 information. 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 Commission will deny a request for an exemption from Tier 2, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design. The grant of an exemption to an applicant must be subject to litigation in the same manner as other issues material to the license hearing. The grant of an exemption to a licensee must be subject to an opportunity for a hearing in the same manner as license amendments.

5.a. An applicant or licensee who references this appendix may depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2* information, or the TS, or requires a license amendment under paragraph B.5.b or B.5.c of this section. When evaluating the proposed departure, an applicant or licensee shall consider all matters described in the plant-specific DCD.

b. A proposed departure from Tier 2, other than one affecting resolution of a severe accident issue identified in the plant-specific DCD or one affecting information required by 10 CFR 52.47(a)(28) to address aircraft impacts, requires a license amendment if it would:

(1) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD;

(2) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety and previously evaluated in the plant-specific DCD;

(3) Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD;

(4) Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD;

(5) Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD;

(6) Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD;

(7) Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered; or

(8) Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

c. A proposed departure from Tier 2 affecting resolution of an ex-vessel severe accident design feature identified in the plant-specific DCD, requires a license amendment if:

(1) There is a substantial increase in the probability of an ex-vessel severe accident such that a particular ex-vessel severe accident previously reviewed and determined to be not credible could become credible; or

(2) There is a substantial increase in the consequences to the public of a particular ex-vessel severe accident previously reviewed.

d. A proposed departure from Tier 2 information required by 10 CFR 52.47(a)(28) to address aircraft impacts shall consider the effect of the changed design feature or functional capability on the original aircraft impact assessment required by 10 CFR 50.150(a). The applicant or licensee shall describe in the plant-specific DCD how the modified design features and functional capabilities continue to meet the aircraft impact assessment requirements in 10 CFR 50.150(a)(1).

e. If a departure requires a license amendment under paragraph B.5.b or B.5.c of this section, it is governed by 10 CFR 50.90.

f. A departure from Tier 2 information that is made under paragraph B.5 of this section does not require an exemption from this appendix.

g. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103(a), who believes that an applicant or licensee who references this appendix has not complied with paragraph VIII.B.5 of this appendix 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 2.309, the petition must demonstrate that the departure does not comply with paragraph VIII.B.5 of this appendix. Further, the petition must demonstrate that the change bears on an asserted noncompliance with an ITAAC acceptance criterion in the case of a 10 CFR 52.103 preoperational hearing, or that the change bears directly on the amendment request in the case of a hearing on a license amendment. Any other party may file a response. 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 VIII.B.5 of this appendix.

6.a. An applicant who references this appendix 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 VI of this appendix and 10 CFR 52.63(a)(5).

b. A licensee who references this appendix may not depart from the following Tier 2* matters without prior NRC approval. A request for a departure will be treated as a request for a license amendment under 10 CFR 50.90.

[LIST IN THIS FORMAT - OBTAIN LIST FROM GENERIC DCD:]

(1) Requirement #1.

c. A licensee who references this appendix may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from the following Tier 2* matters except under paragraph B.6.b of this section. After the plant first achieves full power, the following Tier 2* matters revert to Tier 2 status and are subject to the departure provisions in paragraph B.5 of this section.

[LIST IN THIS FORMAT - OBTAIN LIST FROM GENERIC DCD:]

(1) Requirement #1.

d. Departures from Tier 2* information that are made under paragraph B.6 of this section do not require an exemption from this appendix.

C. Operational requirements.

1. Generic changes to generic TS and other operational requirements that were completely reviewed and approved in the design certification rulemaking and do not require a change to a design feature in the generic DCD are governed by the requirements in 10 CFR 50.109. Generic changes that require a change to a design feature in the generic DCD are governed by the requirements in paragraphs A or B of this section.

2. Generic changes to generic TS and other operational requirements are applicable to all applicants who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs C.3 or C.4 of this section.

3. The Commission may require plant-specific departures on generic TS and other operational requirements that were completely reviewed and approved, provided a change to a design feature in the generic DCD is not required and special circumstances as defined in 10 CFR 2.335 are present. The Commission may modify or supplement generic TS and other

operational requirements that were not completely reviewed and approved or require additional TS and other operational requirements on a plant-specific basis, provided a change to a design feature in the generic DCD is not required.

4. An applicant who references this appendix may request an exemption from the generic TS or other operational requirements. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 52.7. The grant of an exemption must be subject to litigation in the same manner as other issues material to the license hearing.

5. A party to an adjudicatory proceeding for the issuance, amendment, or renewal of a license, or for operation under 10 CFR 52.103(a), who believes that an operational requirement approved in the DCD or a TS derived from the generic TS must be changed may petition to admit such a contention into the proceeding. The petition must comply with the general requirements of 10 CFR 2.309 and must demonstrate 1) why special circumstances as defined in 10 CFR 2.335 are present, or 2) compliance with the Commission's regulations in effect at the time this appendix was approved, as set forth in Section V of this appendix. Any other party may file a response to the petition. 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. All other issues with respect to the plant-specific TS or other operational requirements are subject to a hearing as part of the license proceeding.

6. After issuance of a license, the generic TS have no further effect on the plant-specific TS. Changes to the plant-specific TS will be treated as license amendments under 10 CFR 50.90.

IX. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

[Reserved]

X. Records and Reporting

A. Records

1. The applicant for this appendix shall maintain a copy of the generic DCD that includes all generic changes it makes to Tier 1 and Tier 2, and the generic TS and other operational requirements. The applicant shall maintain the proprietary and safeguards information referenced in the generic DCD for the period that this appendix may be referenced, as specified in Section VII of this appendix.

2. An applicant or licensee who references this appendix shall maintain the plant-specific DCD to accurately reflect both generic changes to the generic DCD and plant-specific departures made under Section VIII of this appendix throughout the period of application and for the term of the license (including any period of renewal).

3. An applicant or licensee who references this appendix shall prepare and maintain written evaluations which provide the bases for the determinations required by Section VIII of this appendix. These evaluations must be retained throughout the period of application and for the term of the license (including any period of renewal).

B. Reporting

1. An applicant or licensee who references this appendix shall submit a report to the NRC containing a brief description of any plant-specific departures from the DCD, including a summary of the evaluation of each. This report must be filed in accordance with the filing requirements applicable to reports in 10 CFR 52.3.

2. An applicant or licensee who references this appendix shall submit updates to its DCD, which reflect the generic changes to and plant-specific departures from the generic DCD

made under Section VIII of this appendix. These updates shall be filed under the filing requirements applicable to final safety analysis report updates in 10 CFR 52.3 and 50.71(e).

3. The reports and updates required by paragraphs X.B.1 and X.B.2 must be submitted as follows:

a. On the date that an application for a license referencing this appendix is submitted, the application must include the report and any updates to the generic DCD.

b. During the interval from the date of application for a license to the date the Commission makes its finding required by 10 CFR 52.103(g), the report must be submitted semi-annually. Updates to the plant-specific DCD must be submitted annually and may be submitted along with amendments to the application.

c. After the Commission makes the finding required by 10 CFR 52.103(g), the reports and updates to the plant-specific DCD must be submitted, along with updates to the site-specific portion of the final safety analysis report for the facility, at the intervals required by 10 CFR 50.59(d)(2) and 50.71(e)(4), respectively, or at shorter intervals as specified in the license.

4. The applicant for an amendment to this appendix shall submit a revised, final generic (master) DCD to the NRC for submission to the Office of Federal Register to satisfy requirements for incorporation by reference.

Dated at Rockville, Maryland, this DAYth day of MONTH, YEAR.

For the Nuclear Regulatory Commission.

NAME OF SECRETARY OF THE COMMISSION,
Secretary of the Commission

ENVIRONMENTAL ASSESSMENT BY THE
U.S. NUCLEAR REGULATORY COMMISSION
RELATING TO THE CERTIFICATION OF THE
NAME OF DESIGN STANDARD PLANT DESIGN
DOCKET NO. 52-XXX

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UNITED STATES NUCLEAR REGULATORY COMMISSION
ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT
RELATING TO THE CERTIFICATION OF THE
NAME OF DESIGN STANDARD PLANT DESIGN
DOCKET NO. 52-**XXX**

The U.S. Nuclear Regulatory Commission (NRC) is proposing a design certification for the **NAME OF DESIGN** design in response to an application submitted on **DATE**, by **NAME OF APPLICANT**. A design certification is a rulemaking; the Commission has decided to adopt design certification rules as appendices to Part 52 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 52).

The NRC has performed an environmental assessment (EA) of the environmental impacts of the proposed new rule and has documented its findings of no significant impact in accordance with the requirements of 10 CFR 51.21 and the National Environmental Policy Act of 1969, as amended (NEPA). This EA also addresses the severe accident mitigation design alternatives (SAMDA), that the NRC has considered as part of this EA for the **NAME OF DESIGN** design. This EA does not address the site-specific environmental impacts of constructing and operating a facility, which references the **NAME OF DESIGN** design certification at a particular site; such impacts will be evaluated as part of any application or applications for the siting, construction, or operation of a facility.

As discussed in detail in Section 4.0 of this EA, the NRC determined that issuing this design certification does not constitute a major Federal action significantly affecting the quality of the human environment. The basis for this finding of no significant impact is that the design

certification would not authorize the siting, construction, or operation of a facility of an **NAME OF DESIGN** reactor design. Rather, the certification would merely codify the **NAME OF DESIGN** design in a rule that could be referenced in a construction permit (CP), combined license (COL), or operating license (OL) application. Further, because the certification is just a rule, it does not involve any resources that have alternative uses. Therefore, the NRC has not prepared an environmental impact statement (EIS) in connection with this action.

The NRC also reviewed **NAME OF APPLICANT**'s evaluation of SAMDAs that generically apply to the **NAME OF DESIGN** design. On that basis, the NRC found that the evaluation provides reasonable assurance that there are no additional SAMDAs beyond those currently incorporated into the **NAME OF DESIGN** design which are cost-beneficial, whether considered at the time of the approval of the **NAME OF DESIGN** design certification or in connection with the licensing of a future facility referencing the **NAME OF DESIGN** design certification, where the plant referencing this appendix is located on a site whose site parameters are within those specified in **Appendix 1B** of the **NAME OF DESIGN** design control document (DCD). These issues are considered resolved for the **NAME OF DESIGN** design.

ENVIRONMENTAL ASSESSMENT

1.0 Identification Of The Proposed Action

The proposed action would certify the **NAME OF DESIGN** design under Appendix D to 10 CFR Part 52. The new rule would allow applicants to reference the certified **NAME OF DESIGN** design as part of a combined license (COL) application under 10 CFR Part 52 or may allow for a construction permit (CP) application under 10 CFR Part 50.

2.0 The Need For The Proposed Action

The NRC has long sought the safety benefits of commercial nuclear power plant standardization and early final resolution of design issues. The NRC plans to achieve these benefits by certifying nuclear plant designs. Subpart B to 10 CFR Part 52 allows for certification in the form of rulemaking of an essentially complete nuclear plant design.

The proposed action would amend 10 CFR Part 52 to certify the **NAME OF DESIGN** design. The amendment would allow prospective licensees to reference the certified **NAME OF DESIGN** design as part of a COL application under 10 CFR Part 52 or may allow for a CP application under 10 CFR Part 50. Those portions of the **NAME OF DESIGN** design included in the scope of the certification rulemaking would not be subject to further safety review or approval in a COL proceeding. In addition, the design certification rule would eliminate the need to consider SAMDAs for any future facilities that reference the certified **NAME OF DESIGN** design.

3.0 The Environmental Impact Of The Proposed Action

Issuing an amendment to 10 CFR Part 52 to certify the **NAME OF DESIGN** standard plant design would not constitute a significant environmental impact. The amendment would merely codify the NRC's approval of the **NAME OF DESIGN** design through its **final design approval/final safety evaluation report** on the design (refer to **NUREG-XXXX or ADAMS MLXXXXXXXXXX**). Furthermore, because the amendment is a rule, it involves no resources that have alternative uses.

As described in Section 4.0 of this EA, the NRC reviewed alternatives to the design certification rulemaking and alternative design features for preventing and mitigating severe accidents. NEPA requires consideration of alternatives to show that the design certification rule is the appropriate course of action and to ensure that the design referenced in the rulemaking

does not exclude any cost-beneficial design changes related to the prevention and mitigation of severe accidents. The NRC concludes that, unlike the proposed design certification rule, the alternatives to certification do not provide for resolution of issues.

Design certification is in keeping with the Commission's intent to make future plants safer than the current generation of plants, to achieve early resolution of licensing issues, and to achieve the safety benefits of standardization (refer to the Advanced Reactor (73 FR 60612), Standardization (52 FR 34884), and Severe Accident Policy Statements (50 FR 32138), and to 10 CFR Part 52). Through its own independent analysis, the NRC also concludes that **NAME OF APPLICANT** adequately considered an appropriate set of SAMDAs and that **none** were cost-beneficial. Although **NAME OF APPLICANT** made **no** design changes as a result of reviewing the SAMDAs, **NAME OF APPLICANT** had **already** incorporated certain features in the **NAME OF DESIGN** design on the basis of the probabilistic risk assessment (PRA) results. Section 4.2 of this EA gives examples of these features. These design features relate to severe accident prevention and mitigation, but **were not considered in the SAMDA evaluation because they were already part** of the **NAME OF DESIGN** design (refer to Section **19.1.6.2** of the DCD, "**NAME OF DESIGN Design Improvement as a Result of Probabilistic Risk Assessment Studies**").

Finally, the design certification rule by itself would not authorize the siting, construction, or operation of a nuclear power plant. The issuance of a CP, early site permit (ESP), COL, or OL which references the **NAME OF DESIGN** design will require a prospective applicant to address the environmental impacts of construction and operation at a specific site. The NRC will then evaluate the environmental impacts and issue an EIS in accordance with 10 CFR Part 51. However, the SAMDA analysis has been completed as part of this EA and can be incorporated by reference into an EIS related to siting, construction, or operation of a nuclear plant that references the **NAME OF DESIGN** design.

4.0 Alternatives To The Proposed Action

The NRC has identified two alternatives to certifying the **NAME OF DESIGN** design. The first alternative would be to take no action to approve the design under Subpart B of 10 CFR Part 52. As with the proposed action, this alternative would not have a significant impact on the quality of the human environment because it would not authorize the siting, construction, or operation of a facility.

In the second alternative, the NRC would issue a **final design approval/Final Safety Evaluation Report (FSER)** on the design, but would not certify the **NAME OF DESIGN** design in a rulemaking. The NRC issued a FSER for the **NAME OF DESIGN** design on **DATE**. Therefore, although the NRC has issued a **final design approval/FSER** on the design, the design would not have finality in proceedings under 10 CFR Part 50 or under Subpart B of 10 CFR Part 52 and could be modified. As a result, the design could require re-evaluation as part of each application to construct and operate a facility of a **NAME OF DESIGN** design at a particular site. This alternative would provide for early internal NRC resolution of design issues to the extent that the design would remain unchanged at the facility application stage, but may not obtain all of the benefits of standardization nor permit overall finality for the resolved design issues.

The NRC sees no advantage in these alternatives compared to the design certification rulemaking proposed for the **NAME OF DESIGN** design. Although neither alternative nor the proposed action (design certification rulemaking) would significantly affect the quality of the human environment, the proposed action achieves the benefits of standardization, permits early resolution of design issues, and provides finality in licensing proceedings for the resolved design issues (including SAMDAs) that are within the scope of the design certification. Therefore, the

NRC concludes that neither of the alternatives to rulemaking would achieve the objectives that the Commission intends by certifying the **NAME OF DESIGN** design pursuant to 10 CFR Part 52, Subpart B.

4.1 Severe Accident Mitigation Design Alternatives

Consistent with the objectives of standardization and early resolution of design issues, the Commission decided to evaluate SAMDAs as part of the design certification for the **NAME OF DESIGN** design. In a 1985 policy statement, the Commission defined the term “severe accident” as an event that is “beyond the substantial coverage of design-basis events,” including events where there is substantial damage to the reactor core (whether or not there are serious offsite consequences). Design-basis events are events analyzed in accordance with the NRC’s Standard Review Plan (NUREG-0800) and documented in Chapter 15 of the DCD.

As part of its design certification application, **NAME OF APPLICANT** performed a PRA for the **NAME OF DESIGN** design to achieve the following objectives:

- Identify the dominant severe accident sequences and associated source terms for the design.
- Modify the design, on the basis of PRA insights, to prevent or mitigate and reduce the risk of severe accidents.
- Provide a basis for concluding that all reasonable steps have been taken to reduce the chances of occurrence, and mitigate the consequences, of severe accidents.

NAME OF APPLICANT’s PRA analysis is described in Chapter 19 of the **NAME OF DESIGN** DCD.

In addition to considering alternatives to the rulemaking process discussed in Section 3.0, applicants for reactor design certification, COLs, or CPs must also consider

alternative design features for severe accidents consistent with the requirements of 10 CFR Part 50, and with a court ruling related to NEPA. These requirements can be summarized as follows:

- 10 CFR 52.79 and 10 CFR 50.34(f)(1)(i)⁵ requires the applicant to perform a plant/site-specific PRA, the aim of which is to seek such improvements in the reliability of core and containment heat removal systems as are significant and practical and do not impact excessively on the plant.
- The U.S. Court of Appeals decision, in *Limerick Ecology Action v. NRC*, 869 F.2d 719 (3rd Cir. 1989), effectively requires the NRC to consider certain SAMDAs in the environmental impact review performed under Section 102(2)(c) of NEPA with respect to the licensing for operation of nuclear power plants.

Although these requirements are not directly related, they share a common purpose to consider alternatives to the proposed design, to evaluate whether potential alternative improvements in the plant design might increase safety performance during severe accidents, and to prevent reasonable alternatives from being foreclosed. It should be noted that the Commission is not required to consider alternatives to the design in this EA. However, as a matter of discretion, the Commission has determined that considering SAMDAs concomitant with the rulemaking is consistent with the intent of 10 CFR Part 52 for early resolution of issues, finality for resolved design issues, and achieving the benefits of standardization.

In its decision in *Limerick Ecology Action v. NRC*, the Court of Appeals for the Third Circuit expressed its opinion that it would likely be difficult to evaluate SAMDAs for NEPA purposes on a generic basis for all nuclear power plants then licensed by the NRC. However,

⁵Although 10 CFR 50.34(f)(1)(i) by its terms does not apply to new construction permits (CP), the Commission's policy is that a CP applicant will be required to comply with 50.34(f)(1)(i).

the NRC has determined that generic evaluation of SAMDAs for the **NAME OF DESIGN** standard design is both practical and warranted for two significant reasons. First, the design and construction of all plants referencing the certified **NAME OF DESIGN** design will be governed by the rule certifying a single design. Second, the site parameters specified in the rule and the **NAME OF DESIGN** DCD establish the consequences for a reasonable enveloping set of SAMDAs for the **NAME OF DESIGN** design. The low residual risk of the **NAME OF DESIGN** design and the limited potential for further risk reductions provides high confidence that additional cost-beneficial SAMDAs would not be found for sites within the site parameter envelope assumed for the **NAME OF DESIGN** EA of SAMDAs. If the actual parameters for a particular site exceed those assumed in the rule and the DCD, then SAMDAs must be re-evaluated in the site-specific environmental report and the EIS. If the actual parameters for a postulated site are bounded by those assumed in the rule and the DCD, then the SAMDA analysis can be incorporated by reference in the site-specific EIS.

4.2 Potential Design Improvements Identified by **NAME OF APPLICANT**

- Provide writeup based on the section of Chapter 19 of the FSER that corresponds to **Section 19.2.6.3 of the SRP.**
- Provide a list of examples of design enhancement features currently included in the **design.**
- Outline the applicant's screening process, and identify how many potential alternatives **were eliminated by each screening criterion.**
- Identify how many potential alternatives were considered for further review based by **cost-benefit assessment.**

4.3 NRC Evaluation of Potential Design Improvements

- Provide writeup based on the section of Chapter 19 of the FSER that corresponds to Section 19.2.6.3 of the SRP.
- Discuss how actual incorporation of severe accident mitigation features into the design led to changes in core damage frequency relative to similar existing operating plants (e.g. PWRs or BWRs).
- Discuss any issues that were identified pertaining to the applicant's evaluation of specific design alternatives, and explain how the issues were resolved.
- Provide a statement pertaining to the NRC staff's acceptability of the applicant's evaluation of the design alternatives.

4.4 Risk Reduction Potential of SAMDAs

4.4.1 NAME OF APPLICANT Evaluation

- Provide writeup based on the section of Chapter 19 of the SER that corresponds to Section 19.2.6.4 of the SRP.
- Identify assumptions used by the applicant in its evaluation of the design alternatives.
- Identify and describe the cost-benefit methodology used by the applicant to determine its estimates of risk reduction.
- State the present worth values for eliminating severe accident risk that the applicant determined.

4.4.2 NRC Evaluation

- Provide writeup based on the section of Chapter 19 of the SER that corresponds to Section 19.2.6.4 of the SRP.

- Provide comments on the applicant's treatment of uncertainties in determining the degree of risk reduction and estimating present worth values.

4.5 Cost Impacts of Candidate SAMDAs

4.5.1 NAME OF APPLICANT Evaluation

- Provide writeup based on the section of Chapter 19 of the SER that corresponds to Section 19.2.6.5 of the SRP.
- Explain how the applicant either determined the capital costs associated with each candidate design improvement, or explained why such a determination was not necessary.

4.5.2 NRC Evaluation

- Provide writeup based on the section of Chapter 19 of the SER that corresponds to Section 19.2.6.5 of the SRP.
- Explain whether or not the applicant's assertion of potential costs is reasonable.

4.6 Cost-Benefit Comparison

4.6.1 NAME OF APPLICANT Evaluation

- Provide writeup based on the section of Chapter 19 of the SER that corresponds to Section 19.2.6.6 of the SRP.
- Describe the methodology used by the applicant to do the cost-benefit comparison.
- Report results of the applicant's evaluation of the maximum averted costs.

4.6.2 NRC Evaluation

- Provide writeup based on the section of Chapter 19 of the SER that corresponds to Section 19.2.6.6 of the SRP.
- Report results of comparing the applicant's maximum averted costs against those estimated by the NRC staff.
- Summarize the review findings, and identify any design alternatives that could become cost-beneficial when taking into consideration uncertainties and the NRC staff evaluations.

4.7 4.7 Conclusions on SAMDAs

As discussed in Section 19.1 of the NAME OF DESIGN FSER, NAME OF APPLICANT used the PRA results reduce or eliminate the significant risk contributors for existing operating plants to arrive at the final NAME OF DESIGN design. As a result, the estimated CDF and risk calculated for the NAME OF DESIGN design are very low, both relative to existing operating plants and in absolute terms. Moreover, the low CDF and risk for the NAME OF DESIGN plant reflect NAME OF APPLICANT 's efforts to systematically minimize the effect of initiators/sequences that have been important contributors to CDF in previous PRAs. This minimization has been done largely through the incorporation of a number of design improvements. Section 19 of the NAME OF DESIGN FSER discusses these improvements and the additional NAME OF DESIGN design features which contribute to low CDF and risk for the NAME OF DESIGN.

Because the NAME OF DESIGN design already has numerous plant features designed to reduce CDF and risk, the benefits and risk reduction potential of additional plant improvements is significantly reduced. This reduction is true for both internally and externally initiated events. Moreover, with the features already incorporated in the NAME OF DESIGN

design, the ability to estimate CDF and risk approaches the limitations of probabilistic techniques. Specifically, when CDFs are estimated to be on the order of 1 in 1,000,000 years, it is possible that the areas of the PRA where modeling is least complete, or supporting data are sparse or even nonexistent, may actually be the more important contributors to risk. Areas not modeled or incompletely modeled include human reliability, sabotage, rare initiating events, construction and design errors, and systems interactions. Although improvements in the modeling of these areas may introduce additional contributors to CDF and risk, the NRC does not expect that additional contributions would change the conclusions in absolute terms.

The NRC concludes that none of the potential design modifications evaluated are justified on the basis of cost-benefit considerations. The NRC further concludes that it is unlikely that any other design changes would be justified in the future on the basis of person-rem exposure because the estimated CDFs are very low on an absolute scale.

5.0 Alternative Use Of Resources

No resources, such as land, water, or physical materials, will be affected by the promulgation of this proposed rule. This proposed rule would codify the **NAME OF DESIGN** design in the *Code of Federal Regulations* but would not authorize the siting, construction, or operation of any nuclear power plant.

6.0 States Consulted And Sources Used

The NRC has sent a copy of the proposed rule and draft EA to every State Liaison Officer and specifically requested their comments on the EA.

The Commission has determined under NEPA and the NRC's regulations in 10 CFR Part 51, Subpart A, that this rule is not a major Federal action significantly affecting the quality of

the human environment. Therefore, the NRC has determined that preparation of an environmental impact statement for this rulemaking is not required. The basis for this determination, as documented in this EA, is that the amendment to 10 CFR Part 52 would not authorize the siting, construction, or operation of a facility referencing the **NAME OF DESIGN** design; it would only codify the **NAME OF DESIGN** design in a rule. Therefore, the NRC staff did not issue the EA for comment specifically by Federal, other State, and local agencies. The NRC's finding of no significant environmental impact was published in the *Federal Register* on **DATE (FR CITATION)**, with the proposed design certification rule and draft EA for the **NAME OF DESIGN** design. The NRC will evaluate the environmental impacts and issue an EIS, as appropriate, in accordance with NEPA as part of any application(s) for the siting, construction, or operation of a facility that would reference the **NAME OF DESIGN** design.

7.0 Public Comments And NRC Responses

(RESERVED FOR FUTURE USE)

8.0 Finding Of No Significant Impact

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has decided not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the proposed design certification rule and the documents referenced in the statement of considerations for the proposed rule. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland, 20852. Publicly available records will be accessible electronically from the

Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents in ADAMS should contact the NRC PDR reference staff at 1-800-397-4209 or 301-415-4737 or send an e-mail to pdr@nrc.gov.