

RULEMAKING ISSUE NOTATION VOTE

October 27, 2010

SECY-10-0142

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: PROPOSED RULE: U.S. ADVANCED BOILING WATER REACTOR
AIRCRAFT IMPACT DESIGN CERTIFICATION AMENDMENT
(RIN 3150-AI84)

PURPOSE:

The purpose of this paper is to request Commission approval to publish for public comment a proposed rulemaking that would certify an amendment to the U.S. Advanced Boiling Water Reactor (ABWR) standard plant design to comply with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.150, "Aircraft Impact Assessment." The staff is also requesting Commission endorsement of the staff's recommended approach for treating multiple suppliers of a single certified design in both the case of the STPNOC amendment and generically. This paper does not address any new commitments.

SUMMARY:

The U.S. Nuclear Regulatory Commission (NRC) staff seeks the Commission's approval of proposed amendments to the regulations in Appendix A, "Design Certification Rule for the U.S. Advanced Boiling Water Reactor," to 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," to comply with 10 CFR 50.150. This action is necessary so that applicants or licensees intending to construct and operate a U.S. ABWR may comply with 10 CFR 50.150 by referencing the amended design certification rule. The applicant for certification of the amendment to the U.S. ABWR design is the STP Nuclear Operating Company (STPNOC).

CONTACT: Nanette Gilles, NRO/DNRL
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BACKGROUND:

STPNOC submitted an application for amendment of the U.S. ABWR standard design to comply with the requirements of 10 CFR 50.150 (the aircraft impact assessment (AIA) rule) on June 30, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML092040048 (public version)). STPNOC submitted this application in accordance with 10 CFR 52.63, "Finality of Standard Design Certifications," which provides criteria for determining when the Commission may modify the certification information for a previously certified standard design in response to a request for amendment from any person. STPNOC submitted its final revision to the amendment application on September 23, 2010 (ADAMS Accession No. ML102770376). STPNOC proposed several changes to the certified U. S. ABWR design to comply with 10 CFR 50.150, including the addition of an alternate feedwater injection system, the addition and upgrading of fire barriers and doors, and the strengthening of certain structural barriers. The NRC staff completed its review of the amendment to the U.S. ABWR standard design and issued its final "Safety Evaluation Report for the STP Nuclear Operating Company Advanced Boiling Water Reactor Amendment to the Design Certification," dated October 14, 2010 (ADAMS Accession No. ML102710198).

On June 12, 2009 (74 FR 28112), the NRC amended its regulations to require applicants for new nuclear power reactor designs to perform a design-specific assessment of the effects of the impact of a large, commercial aircraft. The new provisions in 10 CFR 50.150 require applicants to use realistic analyses to identify and incorporate design features and functional capabilities to ensure, with reduced use of operator actions, that (1) the reactor core remains cooled or the containment remains intact, and (2) spent fuel cooling or spent fuel pool integrity is maintained. These requirements apply to various categories of applicants, including applicants for combined licenses (COLs) that reference a standard design certification that was issued before the effective date of the rule and that has not been amended to comply with the rule. These COL applicants can comply with 10 CFR 50.150 by requesting an amendment to the certified design, or addressing the requirements of 10 CFR 50.150 directly in their COL applications. STPNOC submitted an application for a COL on September 20, 2007 (ADAMS Accession No. ML072830407). STPNOC has requested this amendment to the U.S. ABWR certified design to address the requirements of 10 CFR 50.150.

On May 17-21, 2010, the staff conducted an inspection of STPNOC's AIA performed in support of its proposed amendment to the U.S. ABWR design. On August 13, 2010, the staff issued a Severity Level IV Notice of Violation (NOV) to STPNOC for failing to use realistic analyses for certain aspects of its AIA and failing to fully identify and incorporate those design features and functional capabilities credited in the AIA into the design. With the exception of the issues identified in the NOV, the staff concluded that the AIA complies with the applicable requirements of 10 CFR 50.150.

STPNOC submitted its response to the NOV on September 13, 2010 (ADAMS Accession No. ML102590073). On September 22, 2010, the staff replied to STPNOC that it had found STPNOC's letter generally responsive to the findings described in the NOV (ADAMS Accession No. ML102640660). However, the staff requested that certain aspects of the response be addressed in further detail. On September 29, 2010, STPNOC submitted a letter containing the additional details requested by the staff (ADAMS Accession No. ML102850361). The staff has reviewed these additional details and found them acceptable. The staff has no outstanding issues from the inspection of the STPNOC AIA.

DISCUSSION:*Staff Review of STPNOC U.S. ABWR Amendment Application*

The NRC's review of the applicant's proposed amendment to the U.S. ABWR design confirmed that the applicant has complied with 10 CFR 50.150. Specifically, the staff confirmed that the applicant adequately described key AIA design features and functional capabilities in accordance with the AIA rule and conducted an assessment reasonably formulated to identify design features and functional capabilities to show, with reduced use of operator action, that the facility can withstand the effects of an aircraft impact. In addition, the staff determined that there will be no adverse impacts from complying with the requirements for consideration of aircraft impacts on conclusions reached by the NRC in its review of the original U.S. ABWR design certification. Finally, the staff determined that STPNOC and its contractors are technically qualified to perform the design work associated with the amended portion of the U.S. ABWR design represented by STPNOC's application and to supply the amended portion of the U.S. ABWR design. STPNOC's amendment to the U.S. ABWR design has achieved the Commission's objectives of enhanced public health and safety and enhanced common defense and security through improvement of the facility's inherent robustness at the design stage.

STPNOC U.S. ABWR Amendment Approach

When the Commission decided to approve standard reactor designs by rulemaking, as opposed to licensing, in the 1989 Part 52 rulemaking, it stated that a design certification rule "does not, strictly speaking, belong to the designer." See 73 FR 15375; April 18, 1989 (third column). Nonetheless, the Commission implicitly recognized the need to protect the commercial and proprietary interests of the original applicant who intends to supply the certified design, should there be another possible entity who intends to use the design in some fashion without approval or compensation to the original design certification applicant. *Id.* The Commission did not describe, in either the 1989 rulemaking or in the Statements of Consideration for that rulemaking, the particular regulatory approach and structure to be used for a design certification rule with two or more suppliers¹ of the certified design. In the years after the 1989 Part 52 rulemaking, the Commission did not need to address the circumstance of multiple suppliers of the same certified design ("multiple suppliers") to an end user.² However, with the filing of the U.S. ABWR design certification amendment request by STPNOC, as well as Toshiba's March 3, 2010, letter to the NRC stating that it intends to seek renewal of the U.S. ABWR design certification (ADAMS Accession No. ML100710026), the NRC must now determine the regulatory approach and structure for the amendment (and, for completeness, the renewal) of a certified design where there will be multiple suppliers.

When the staff was advised of STPNOC's intent to submit an amendment of the U.S. ABWR design certification, the staff began a process of identifying and considering possible regulatory

¹ The term, "supplier," reflects the staff's view that such entities are different from a "vendor" who supplies a system or component, or services related to that system or component, to a "user" such as an applicant for or holder of a COL.

² The term, "user," means an entity which references the standard design certification rule in its application, and the holder of a permit or license which incorporates the standard design certification.

alternatives, with the goal of recommending to the Commission a single regulatory approach and structure to be used for all design certifications with multiple suppliers. The staff identified three alternatives that the NRC could reasonably select:

- Separate rules: Develop separate design certification rules for each supplier.
- Branches: Develop one design certification rule with multiple branches; with each branch describing a complete design to be supplied by each supplier.
- Options: Develop one design certification rule with options; with each option describing a portion of the certified design which may be selected by the user as an option to the original “reference” certified design.

Table 1 of Enclosure 1 presents the staff’s current views with respect to the differences between these three alternatives.

Based upon the staff’s assessment of the differences between these three alternatives, the staff recommends that, as an overall approach, the Commission adopt the “branches” alternative to be used in cases for design certifications with multiple suppliers, with consideration given to limited use of the “options” approach in the case of certain limited-scope design certification amendments, as in the case of the STPNOC amendment to comply with the AIA rule.

During discussions with STPNOC about the processing of its request to amend the U.S. ABWR design certification, STPNOC proposed that the staff adopt a process akin to the “options” approach for the STPNOC U.S. ABWR amendment. STPNOC stated that its request was based upon a number of factors which it considered to be unique to its situation. STPNOC requested that it be considered the supplier for only that portion of the U.S. ABWR design certification necessary to comply with the AIA rule, and which is the subject of the amendment proceeding. Under this approach, STPNOC need not be qualified to supply the complete U.S. ABWR design nor would it be required to provide acceptable substitutes for the proprietary information developed by GE Nuclear Energy (GE) (as it would under the “branches” approach).

Upon consideration, the staff is recommending that the Commission use the “options” approach for the STPNOC amendment of the U.S. ABWR design certification. The staff’s recommendation is based upon the following considerations. As with the “branches” alternative, there is no statute or NRC regulation prohibiting the use of the “options” approach. Nor is there any provision which prohibits the concurrent use of both alternatives – so long as the NRC is able to articulate a basis for doing so. Moreover, all of the staff’s safety and regulatory objectives are met. STPNOC is providing sufficient information to determine its technical qualifications to supply the STPNOC-sponsored amendments addressing the AIA rule to third party users (i.e., users other than STPNOC itself). In addition, the staff believes that there are no insurmountable issues in requiring the user (in most cases, the COL applicant referencing the U.S. ABWR and the STPNOC option) to prepare a single design control document (DCD) integrating information from both the DCD developed by GE and the DCD developed by STPNOC. The “options” approach also avoids or addresses all of STPNOC’s concerns with the use of the “branches” alternative for its request to amend the U.S. ABWR. STPNOC would not have to develop and submit to the NRC information equivalent to the proprietary information developed by GE to support the STPNOC amendment application. Nor does STPNOC have to

demonstrate its technical qualifications to supply the entire U.S. ABWR certified design; it would only have to demonstrate its technical qualifications to supply the STPNOC option. STPNOC has indicated that Toshiba will prepare an application for renewal of the U.S. ABWR design certification (with Toshiba being the renewal applicant) which reflects the “branches” approach. That application is likely to be submitted by the end of 2010. Thus, the STPNOC option would have a limited period of effectiveness, that is, until the renewal of the U.S. ABWR design certification. Finally, the “options” approach fully protects the legitimate proprietary and commercial interests of GE in the original U.S. ABWR design certification.

After considering STPNOC’s proposal and the bases for its request, the staff recommends that the Commission adopt the “options” alternative for the STPNOC amendment of the U.S. ABWR design certification, but that the “branches” alternative be regarded as the “default” for all renewals of design certifications and for major design certification amendments. If the staff receives other limited-scope design certification amendments (similar in scope to the STPNOC amendment request), it will consider whether the “branches” approach or the “options” approach offer the most effective and efficient regulatory alternative at that time based on the scope of the amendment and the specific circumstances associated with the particular application.

By implementing the “options” approach for the STPNOC U.S. ABWR amendment, a COL applicant that references the U.S. ABWR standard design certification can meet the requirements of the AIA rule by referencing both the GE DCD and the STPNOC DCD or by referencing only the GE DCD and addressing the requirements of the AIA rule separately in its COL application.

Technical Qualifications

The staff is proposing to add a new paragraph A.4 to Section IV, “Additional Requirements and Restrictions,” of Appendix A to 10 CFR Part 52. Proposed paragraph A.4 would indicate requirements that must be met in cases where the COL applicant is not using the entity that originally applied for the design certification (or amendment) to supply the design for the applicant’s use. Proposed paragraph A.4.a would require a COL applicant referencing Appendix A to demonstrate, as part of its application, that an entity other than GE is qualified to supply the U.S. ABWR certified design unless GE supplies the design for the applicant’s use. Proposed paragraph A.4.b would require that a COL applicant referencing the STPNOC certified design option demonstrate, as part of its application, that an entity other than STPNOC and Toshiba American Nuclear Energy (TANE) acting together is qualified to supply the STPNOC certified design option, unless STPNOC and TANE acting together supply the design option for the applicant’s use. In cases in which a COL applicant is not using GE to supply the U.S. ABWR certified design, or is not using STPNOC and TANE acting together to supply the STPNOC certified design option, this information is necessary to support any NRC finding under 10 CFR 52.73(a) that an entity other than the one that originally sponsored the design certification or design certification amendment is qualified to supply the certified design or certified design option.

Under 10 CFR 52.47(a)(7), a design certification applicant must demonstrate, as part of its application, that it is technically qualified to engage in the proposed activities (e.g., to supply the design work associated with the amended portion of the U.S. ABWR design represented by STPNOC’s application and to supply the amended portion of the design). Based on the staff’s

review of the STPNOC application to amend the U.S. ABWR certified design, the staff determined that it cannot find that STPNOC, by itself, is technically qualified to engage in the proposed activities. However, the staff determined that it can find that STPNOC and TANE acting together are qualified to supply the amended portion of the U.S. ABWR design certification represented in the STPNOC DCD. Therefore, the staff is adding paragraph A.4.b to ensure that the basis for an NRC finding of technical qualification in support of this design certification amendment remains valid.

Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information

The staff is proposing to revise paragraph E of Section VI, "Issue Resolution," of Appendix A to 10 CFR Part 52, which describes the procedure that an interested member of the public must follow to obtain access to sensitive unclassified non-safeguards information (including proprietary information) (SUNSI) and safeguards information (SGI) for the U.S. ABWR design to request and participate in proceedings that involve licenses and applications that reference the U.S. ABWR design. The staff is proposing to replace the current information in paragraph E with a statement that the NRC will specify, at an appropriate time, the procedure that interested persons must follow to review SGI or SUNSI, for the purpose of participating in the hearing required by 10 CFR 52.85, "Administrative review of applications; hearings," the hearing provided by 10 CFR 52.103, "Operation under a combined license," or any other proceeding related to Appendix A to 10 CFR Part 52 in which interested persons have a right to request an adjudicatory hearing. Note that for the COL application submitted by STPNOC in 2007, the procedures governing access to SUNSI and SGI for the STPNOC amendment of the U.S. ABWR design certification will be controlled by the Commission's access order published as part of the Notice of Order, Hearing, and Opportunity to Petition for Leave to Intervene (74 FR 7934; February 20, 2009, at 7936).

In the four currently approved design certifications (10 CFR Part 52, Appendices A through D), paragraph VI.E presents specific directions on how to obtain access to proprietary information and SGI on the design certification in connection with a license application proceeding referencing that design certification rule. The staff is proposing this change because these provisions were developed before the events of September 11, 2001. After September 11, 2001, Congress changed the statutory requirements governing access to SGI, and the NRC revised its rules, procedures, and practices governing control and access to SUNSI and SGI. The NRC now believes that generic direction on obtaining access to SUNSI and SGI is no longer appropriate for newly approved design certification rules (DCRs). Accordingly, the specific requirements governing access to SUNSI and SGI contained in paragraph VI.E of the four currently approved DCRs should not be included in the design certification rule for the U.S. ABWR. Instead, the NRC should specify the procedures to be used for obtaining access at an appropriate time in the combined license proceeding referencing the U.S. ABWR DCR. The staff plans to include this change in any future amendment or renewal of the other existing DCRs. However, the staff does not plan to initiate rulemaking to change paragraph VI.E of the existing DCRs, to minimize unnecessary resource expenditures by both the original DCR applicant and the NRC.

Processes for Changes and Departures from Aircraft Impact Assessment Design Features

The processes for generic changes to, or plant-specific departures from, the DCD appear in Section VIII, "Processes for Changes and Departures," of Appendix A to 10 CFR Part 52. The staff is proposing changes to Section VIII to address the change control process specific to departures from the information required by 10 CFR 52.47(a)(28) to address the NRC's AIA requirements in 10 CFR 50.150. Specifically, the staff is proposing to revise paragraph B.5.b of Section VIII to indicate that the criteria in this paragraph, used to determine whether a proposed departure from Tier 2 information requires a license amendment, do not apply to a proposed departure affecting information required by 10 CFR 52.47(a)(28) to address aircraft impacts. In addition, the staff is proposing to add a new paragraph B.5.d that would require an applicant or licensee that proposes to depart from the information required by 10 CFR 52.47(a)(28) for inclusion in the DCD for the standard design certification to consider the effect of the changed feature or capability on the original assessment required by 10 CFR 50.150(a). Consistent with the Commission's intent when it issued the AIA rule, plant-specific departures from the AIA information in the final safety analysis report (FSAR) would not require a license amendment, but may be made by the licensee upon compliance with the substantive requirements of the AIA rule to support the change. The applicant or licensee would also be required to document how the modified design features and functional capabilities continue to meet the assessment requirements in 10 CFR 50.150(a)(1) in accordance with the reporting requirements in paragraph A.3, Section X, "Records and Reporting," of Appendix A to 10 CFR Part 52. The proposed addition of these provisions is consistent with the NRC's plans when it issued the AIA rule in 2009, as noted in the Statements of Consideration for that rule (74 FR 28112; June 12, 2009, at 28122, third column).

Recordkeeping Requirements for Aircraft Impact Assessments

The requirements that apply to maintaining records of changes to and departures from the generic DCD, which would be reflected in the plant-specific DCD appear in Section X of Appendix A to 10 CFR Part 52. The requirements for submitting reports (including updates to the plant-specific DCD) to the NRC also appear in Section X. The staff is proposing to add a new paragraph A.4.a to Section X that would require the applicant for the AIA amendment to the U.S. ABWR design to maintain a copy of the AIA that it had performed to comply with the requirements of 10 CFR 50.150(a) for the term of the certification (including any period of renewal). In addition, the staff is proposing to add a new paragraph A.4.b that would require an applicant or licensee that references the AIA amendment to maintain a copy of the AIA throughout the pendency of the application and for the term of the license (including any period of renewal). The addition of these paragraphs is consistent with the NRC's plans when it issued the AIA rule in 2009, as noted in the Statements of Consideration for that rule (74 FR 28112; June 12, 2009, at 28121, second column).

Rulemaking Procedure

The standard design certification amendment is being conducted in accordance with the applicable requirements in Subpart B, "Standard Design Certifications," of 10 CFR Part 52; 10 CFR Part 2, "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders"; and 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." The rulemaking package includes the *Federal Register* notice

of proposed rulemaking and the NRC's draft environmental assessment for the AIA amendment to the U.S. ABWR design. In addition, the *Federal Register* notice provides a 75-day period for comment on those documents as well as the STPNOC DCD, which would be incorporated by reference into the design certification rule. The DCD is available on the NRC's public Web site at <http://www.nrc.gov/reactors/new-reactors/design-cert.html>.

The Statements of Consideration for the proposed rule would describe the process by which a member of the public could request and access SUNSI to provide meaningful comment on the proposed rule. The NRC provided a process for requesting access to proprietary information and SGI during the first three design certification rulemakings (U.S. ABWR, System 80+, and AP600). However, no requests were received during these rulemakings. In the fourth design certification rulemaking (AP1000), the NRC did not include the procedures for access, in part because of the historical lack of requests for such information and because of policy changes in information security after the events of September 11, 2001. The NRC staff is proposing to resume the practice of including in the notice of proposed rulemaking a description of the procedures for obtaining access to these types of information for the purpose of commenting on the proposed rule. Note that, in the case of the STPNOC application for amendment of the U.S. ABWR design, the applicant only submitted non-proprietary SUNSI in support of its application. STPNOC did not submit any SGI or proprietary information as part of its amendment application. Accordingly, the U.S. ABWR AIA amendment notice of proposed rulemaking only refers to SUNSI information. Future notices of proposed rulemaking for design certification may refer to SUNSI, SGI, or both, depending upon the information received from the design certification applicant.

The description of the procedures for obtaining access to SUNSI for this amendment to the U.S. ABWR will not be identical to the procedures described in the notice of proposed rulemaking for the first three DCRs. Instead, the procedures will be based on the procedures described in the Commission orders accompanying recent notices of hearing and opportunity for hearing, modified to reflect that design certification is a notice and comment rulemaking proceeding rather than a licensing proceeding with adjudicatory procedures. This proposal is based on: (1) the fact that a member of the public may seek SUNSI regardless of the NRC's notice (or lack thereof) of the procedures for doing so; (2) issue finality accorded to public and non-public portions of the design control document (DCD) depend in part upon the NRC's representation that comments should have been provided in the proposed rule; and (3) lack of a compelling reason not to include this process as it is done for a hearing on a COL application. The staff is informing the Commission of its proposal, which differs from the manner in which access to SUNSI was described in the most recent design certification rulemaking.

RESOURCES:

The Office of New Reactors has budgeted 0.7 full-time equivalent (FTE) staff for fiscal year (FY) 2011 to manage this rulemaking. The Office of the General Counsel (OGC), Office of Administration, and Office of Information Services have each budgeted a total of 0.1 FTE in FY 2011 for this rulemaking.

Resources for FY 2012 have been requested through the planning, budget, and performance management process.

RECOMMENDATIONS:

That the Commission:

- (1) Approve the proposed amendment to 10 CFR Part 52 for publication in the *Federal Register*.
- (2) Endorse the staff's recommended approach for treating multiple suppliers of a single certified design in both the case of the STPNOC amendment and generically.
- (3) Certify that this rule, if promulgated, will not have a negative economic impact on a substantial number of small entities, in order to satisfy requirements of the Regulatory Flexibility Act of 1980, as amended (5 U.S.C. § 605(b)).
- (4) Determine that the U.S. ABWR amendment's compliance with the issue finality provisions of 10 CFR 52.63 with respect to changes necessary to comply to the AIA rule were addressed in the AIA rulemaking, when the Commission "administratively exempted" the AIA rule from the issue finality provisions in Part 52.
- (5) Note the following:
 - (a) The NRC will publish the proposed rule (Enclosure 1) in the *Federal Register* for a 75-day comment period.
 - (b) The staff has performed an environmental assessment that resulted in a finding of no significant impact and evaluated severe accident mitigation design alternatives for the proposed amendment (Enclosure 2).
 - (c) This proposed rule would amend information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. § 3501 et seq.). These information collection requirements must be submitted to the Office of Management and Budget (OMB) for approval on, or immediately after, the date of publication of the proposed rule in the *Federal Register*. OMB approval may impact the schedule for this rulemaking if it is not received before the Commission's decision on the final rule.
 - (d) The staff will inform the Chief Counsel for Advocacy of the Small Business Administration of the certification on the economic impact on small entities and the reasons for it, as required by the Regulatory Flexibility Act of 1980 (Section XIII of Enclosure 1).
 - (e) The appropriate congressional committees will be informed.
 - (f) The Office of Public Affairs will issue a press release.
 - (g) The staff will use a communication plan that includes frequently asked questions prepared specifically for the AIA amendment to the U.S. ABWR standard design.

COORDINATION:

OGC has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer (OCFO) indicated that, because resources did not exceed 1 FTE in any fiscal year, OCFO did not need to review the paper. The Office of Information Services has reviewed this paper for information technology and information management implications and concurs with it.

The staff presented the Advanced Safety Evaluation Report (SER) for the STPNOC amendment to the U.S. ABWR design certification to the Advisory Committee on Reactor Safeguards (ACRS) on September 9, 2010. In a September 20, 2010, letter to the Chairman (ADAMS Accession No. ML102630190), the ACRS stated that the STPNOC application to amend the U.S. ABWR design certification rule and the staff's SER are acceptable subject to satisfactory closure of the issues identified in the NOV and ACRS Recommendation 2. ACRS Recommendation 2 states that the staff should ensure that the applicant demonstrates and documents that the temperature within the fire-protected area where the alternate feedwater injection system instrument rack is to be located will not exceed the instruments' environmental qualification conditions. STPNOC has performed an analysis demonstrating that the temperature within this area will not exceed the instruments' environmental qualification conditions and has incorporated the analysis into its AIA. The staff has reviewed the analysis and finds it acceptable. The staff has also confirmed that the analysis has been incorporated into the applicant's AIA. The staff is preparing its response to the ACRS letter. The staff will provide an information copy of the enclosed *Federal Register* notice to the ACRS after publication.

/RA by Martin J. Virgilio for/

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. *Federal Register* Notice
2. Environmental Assessment

NUCLEAR REGULATORY COMMISSION

10 CFR Part 52

RIN 3150-A184

NRC-2010-0134

U.S. Advanced Boiling Water Reactor Aircraft Impact Design Certification Amendment

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) proposes to amend its regulations to certify an amendment to the U.S. Advanced Boiling Water Reactor (ABWR) standard plant design to comply with the NRC's aircraft impact assessment (AIA) regulations. This action would allow applicants or licensees intending to construct and operate a U.S. ABWR to comply with the NRC's AIA regulations by referencing the amended design certification rule (DCR). The applicant for certification of the amendment to the U.S. ABWR design is STP Nuclear Operating Company (STPNOC). The public is invited to submit comments on this proposed DCR, the STPNOC design control document (DCD) that would be incorporated by reference into the DCR, and the environmental assessment (EA) for the amendment to the U.S. ABWR design. The public is also invited to submit comments on the NRC's proposed approach for treating multiple suppliers of a single certified design.

DATES: Submit comments on the DCR, DCD, and/or EA by **[insert date 75 days after publication in the Federal Register.]** Submit comments on the information collection 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: Please include Docket ID NRC-2010-0134 in the subject line of your comments. For instructions on submitting comments and accessing documents related to this action, see Section I, "Submitting Comments and Accessing Information" in the SUPPLEMENTARY INFORMATION section of this document. You may submit comments by any one of the following methods.

Federal Rulemaking Web site: Go to <http://www.regulations.gov> and search for documents filed under Docket ID NRC-2010-0134. 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.

FOR FURTHER INFORMATION CONTACT: Ms. Nanette V. Gilles, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone at 301-415-1180; e-mail: Nanette.Gilles@nrc.gov; or Stacy Joseph, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone 301-415-2849; e-mail: Stacy.Joseph@nrc.gov.

SUPPLEMENTARY INFORMATION:

- I. Submitting Comments and Accessing Information
- II. Background
- III. Discussion
 - A. Technical Evaluation of STPNOC Amendment to U.S. ABWR Design
 - B. Regulatory and Policy Issues

- C. Changes to Appendix A
- IV. Section-by-Section Analysis
 - A. Introduction (Section I)
 - B. Definitions (Section II)
 - C. Scope and Contents (Section III)
 - D. Additional Requirements and Restrictions (Section IV)
 - E. Applicable Regulations (Section V)
 - F. Issue Resolution (Section VI)
 - G. Processes for Changes and Departures (Section VIII)
 - H. Records and Reporting (Section X)
- V. Agreement State Compatibility
- VI. Availability of Documents
- VII. Procedures for Access to Sensitive Unclassified Non-Safeguards Information for Preparation of Comments on the Proposed Amendment to the U.S. ABWR Design Certification
- VIII. Plain Language
- IX. Voluntary Consensus Standards
- X. Finding of No Significant Environmental Impact: Availability
- XI. Paperwork Reduction Act Statement
- XII. Regulatory Analysis
- XIII. Regulatory Flexibility Act Certification
- XIV. Backfitting

I. Submitting Comments and Accessing Information

Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site <http://www.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.

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 Room O-1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

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

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Federal Rulemaking Web site: Public comments and supporting materials related to this proposed rule can be found at <http://www.regulations.gov> by searching on Docket ID: NRC-2010-0134.

Documents that are not publicly available because they are considered to be either Sensitive Unclassified Non-Safeguards Information (SUNSI) (including SUNSI constituting proprietary information), or Safeguards Information (SGI) may be available to interested persons who may wish to comment on the proposed design certification amendment. Interested persons shall follow the procedures described in the SUPPLEMENTARY INFORMATION section of this document, Section VII, "Procedures for Access to Sensitive Unclassified Non-Safeguards

Information and Safeguards Information for Preparation of Comments on the Proposed Amendment to the U.S. ABWR Design Certification.”

II. Background

Title 10 of the *Code of Federal Regulations*, (10 CFR) Part 52 “Licenses, Certifications, and Approvals for Nuclear Power Plants”, Subpart B, presents the process for obtaining standard design certifications. Section 52.63, “Finality of standard design certifications,” provides criteria for determining when the Commission may amend the certification information for a previously certified standard design in response to a request for amendment from any person. On June 30, 2009, STPNOC tendered its application with the NRC for amendment of the U.S. ABWR standard plant design certification to comply with the requirements of 10 CFR 50.150, “Aircraft impact assessment” (ADAMS Accession Number ML092040048). STPNOC submitted this application in accordance with 10 CFR 52.63. STPNOC proposed several changes to the certified U.S. ABWR design to comply with 10 CFR 50.150, including the addition of an alternate feedwater injection system, the addition and upgrading of fire barriers and doors, and the strengthening of certain structural barriers. The NRC formally accepted the application as a docketed application for amendment to the U.S. ABWR design certification (Docket No. 52-001) on December 1, 2009 (74 FR 62829).

On June 12, 2009 (74 FR 28112), the NRC amended its regulations to require applicants for new nuclear power reactor designs to perform a design-specific assessment of the effects of the impact of a large, commercial aircraft (the AIA rule). These new provisions in 10 CFR 50.150 require applicants to use realistic analyses to identify and incorporate design features and functional capabilities to ensure, with reduced use of operator actions, that (1) the reactor core remains cooled or the containment remains intact, and (2) spent fuel cooling or spent fuel pool integrity is maintained. When it issued the AIA rule, the Commission stated that the requirements in existence at that time, in conjunction with the March 2009 revisions to 10 CFR 50.54 to address loss of large areas of the plant due to explosions or fires, would continue to

provide adequate protection of the public health and safety and the common defense and security. Nevertheless, the Commission decided to also require applicants for new nuclear power reactors to incorporate into their design additional features to show that the facility can withstand the effects of an aircraft impact. The Commission stated that the AIA rule to address the capability of new nuclear power reactors relative to an aircraft impact is based both on enhanced public health and safety and enhanced common defense and security, but is not necessary for adequate protection. Rather, the AIA rule's goal is to enhance the facility's inherent robustness at the design stage.

The AIA rule requirements apply to various categories of applicants, including applicants for combined licenses (COLs) that reference a standard design certification issued before the effective date of the AIA rule, which have not been amended to comply with the rule. These COL applicants have two methods by which they can comply with 10 CFR 50.150. They can request an amendment to the certified design or they can address the requirements of 10 CFR 50.150 directly in their COL application. STPNOC submitted an application for a COL on September 20, 2007. STPNOC has requested this amendment to the U.S. ABWR certified design to address the requirements of the AIA rule.

III. Discussion

A. Technical Evaluation of STPNOC Amendment to U.S. ABWR Design

The NRC's review of the applicant's proposed amendment to the U.S. ABWR design certification confirmed that the applicant has complied with 10 CFR 50.150. Specifically, the staff confirmed that the applicant adequately described key AIA design features and functional capabilities in accordance with the AIA rule and conducted an assessment reasonably formulated to identify design features and functional capabilities to show, with reduced use of operator action, that the facility can withstand the effects of an aircraft impact. In addition, the staff determined that there will be no adverse impacts from complying with the requirements for consideration of aircraft impacts on conclusions reached by the NRC in its review of the original

U.S. ABWR design certification. Finally, the staff determined that STPNOC and its contractors are technically qualified to perform the design work associated with the amended portion of the U.S. ABWR design represented by STPNOC's application and to supply the amended portion of the U.S. ABWR design. STPNOC's amendment to the U.S. ABWR design has achieved the Commission's objectives of enhanced public health and safety and enhanced common defense and security through improvement of the facility's inherent robustness at the design stage.

B. Regulatory and Policy Issues

Multiple Suppliers for a Single Certified Design

In the 1989 10 CFR Part 52 rulemaking, the Commission decided to approve standard reactor designs by rulemaking, as opposed to licensing, and stated that a design certification rule "does not, strictly speaking, belong to the designer" (54 FR 15327; April 18, 1989, at 15375, third column). Nonetheless, the Commission implicitly recognized the need to protect the commercial and proprietary interests of the original applicant who intends to supply the certified design, should there be another entity who intends to use the design in some fashion without approval or compensation to the original design certification applicant. *Id.* The protection was provided, in part, through the decision of the Commission to protect "proprietary information"¹ developed by the original design certification applicant, as well as by several other regulatory provisions in both 10 CFR Part 52 and 10 CFR Part 170.

Based upon the licensing experience with operating nuclear power plants, the Commission understood that portions of proposed design certifications, primarily in the area of fuel design, would likely be regarded as proprietary information (trade secrets) by future design certification applicants. To ensure that design certification applicants would not be adversely affected in their capability to protect this proprietary information as a result of the NRC's decision

¹ The term, "proprietary information," means trade secrets or commercial or financial information that are privileged or confidential, as those terms are used under the Freedom of Information Act and the NRC's implementing regulation at 10 CFR Part 9.

to approve designs by rulemaking rather than licensing, the Commission adopted 10 CFR 52.51(c), which states, in relevant part:

Notwithstanding anything in 10 CFR 2.390 to the contrary, proprietary information will be protected in the same manner and to the same extent as proprietary information submitted in connection with applications for licenses, provided that the design certification shall be published in Chapter I of this title.

10 CFR 52.51(c) (1990, as originally promulgated in the 1989 Part 52 rulemaking, see 54 FR 15372; April 18, 1989, at 15390.²

Having protected proprietary information developed by the design certification applicant, the Commission then adopted several additional rulemaking provisions in 10 CFR Part 52 providing additional regulatory protection to the original design certification applicant against unfair use of the design certification by other suppliers. The Commission required the (original) design certification applicant, as well as the applicant for renewal of the design certification, to include in the application:

a level of design information sufficient to enable the Commission to judge the applicant's proposed means of assuring that construction conforms to the design and to reach a final conclusion on all safety questions associated with the design before the certification is granted. The information submitted for a design certification must include performance requirements and design information sufficiently detailed to permit the preparation of acceptance and inspection requirements by the NRC, and procurement specifications and construction and installation specifications by an applicant.

10 CFR 52.47(a)(2) (1990, as originally promulgated in the 1989 Part 52 rulemaking, see 54 FR 15372; April 18, 1989; at 15390);³ 10 CFR 52.57(a).

² As originally adopted in 1989, 10 CFR 52.51(c) consisted of two sentences. The first sentence limited the bases for a decision in a hearing on a design certification to information on which all parties had an opportunity to comment; the second sentence is the language of the current regulation. The first sentence was removed in 2004 as a conforming change when the Commission removed the hearing requirements for design certification (69 FR 2182; January 14, 2004).

³ This language was moved to the introductory paragraph of the current 10 CFR 52.47 in the 2007 revision of 10 CFR Part 52.

The Commission also adopted 10 CFR 52.63(c), requiring the applicant referencing the design certification to provide the information required to be developed by 10 CFR 52.47(a)(2) or its equivalent:

The Commission will require, before granting a construction permit, combined license, operating license, or manufacturing license which references a design certification rule, that information normally contained in certain procurement specifications and construction and installation specifications be completed and available for audit if the information is necessary for the Commission to make its safety determinations, including the determination that the application is consistent with the certification information. This information may be acquired by appropriate arrangements with the design certification applicant.

10 CFR 52.63(c) (1990). By requiring a level of detailed information supporting the certified design be developed and available for NRC audit at renewal and when the design was referenced for use, the Commission ensured (among other things) that entities who were not the original design certification applicant would not have an inordinate financial advantage when either supplying the certified design to a referencing user, or referencing the certified design in an application.

The Commission also relied on its statutory authority to make a technical qualifications finding under Section 182 of the Atomic Energy Act of 1954 (AEA) as amended, to adopt 10 CFR 52.73, which effectively prohibits a COL applicant from referencing a certified design unless the entity that actually supplies the design to the referencing applicant is technically qualified to supply the certified design:

In the absence of a demonstration that an entity other than the one originally sponsoring and obtaining a design certification is qualified to supply such design, the Commission will entertain an application for a combined license which references a standard design certification issued under Subpart B only if the entity that sponsored and obtained the certification supplies the certified design for the applicant's use.

10 CFR 52.73 (1990, as originally promulgated in the 1989 Part 52 rulemaking, see 54 FR 15372; April 18, 1989, at 15393).⁴

Apart from the provisions discussed previously, the Commission also indicated in the statements of consideration for the 1989 10 CFR Part 52 rulemaking that the finality provisions in 10 CFR 52.63 provided some protection against arbitrary amendment or rescission of the design certification. Any proposed rescission or amendment of the design certification must be accomplished under notice and comment rulemaking procedures, as required by 10 CFR 52.63(a)(1). The original applicant would, accordingly, have the opportunity to comment on any proposed change to the design, including those changes initiated by other entities.

Finally, the Commission adopted, as part of the 1989 rulemaking, conforming amendments to 10 CFR 170.12(d) and (e). Under these provisions, entities other than the original design certification applicant who provide either the renewed or original certified design to a referencing applicant for a construction permit, operating license or COL must pay the applicable installment of the deferred NRC fee⁵ for review of the original or renewed design certification.

After the 1989 rulemaking, in each of the four existing DCRs in 10 CFR Part 52, Appendices A through D, the Commission adopted an additional provision serving to protect the proprietary information and SGI developed by the original design certification applicant. Paragraph IV.A.3 of each rule required an applicant referencing the DCR to “physically include in the plant-specific DCD proprietary information and safeguards information referenced in the

⁴ This provision was slightly reworded in the 2007 rulemaking amending 10 CFR Part 52 in a newly-designated paragraph (b) to 10 CFR 52.73 (72 FR 49352; August 28, 2007).

⁵ In the 1989 final 10 CFR Part 52 rulemaking, the Commission decided that the payment of the fee imposed upon the design certification applicant to recover the NRC's costs for review and approval of the certified design via rulemaking, and renewal of the design certification rule, should be deferred and recovered in equal increments the first five times the DCR was referenced in an application. See 10 CFR 107.12(d)(2) (renewal of DCR); 10 CFR 170.12(e)(2)(i) (initial certification) (1990), as originally promulgated in the 1989 10 CFR Part 52 rulemaking (see 54 FR 15372; April 18, 1989, at 15399).

DCD.” The Commission’s view was that by “physically” including the proprietary information and SGI developed by the original DCR applicant in the application, this would be demonstrative of the referencing applicant’s rights to use that information; otherwise, the referencing applicant could provide the equivalent information (62 FR 25800; May 12, 1997, at 25818, third column). In 2007, at the request of NEI and other industry commenters, the word, “physically” was removed from Paragraph IV of each of the four DCRs, to allow the DCR applicant more flexibility in how the proprietary information and SGI are included in the application referencing the DCR (72 FR 49352; August 28, 2007, at 49363-49365). This change was not intended to represent a retreat from the Commission’s position that the referencing applicant has the appropriate commercial rights to reference the proprietary and SGI information or its equivalent. However, the NRC acknowledges that under the current language of paragraph IV.A.3., the NRC must do more to verify that the referencing applicant has the appropriate commercial rights to the proprietary and SGI information developed by the originating applicant (unless, of course, the referencing applicant indicates that it is supplying “equivalent” information).

The Commission did not describe in the 1989 rulemaking the particular regulatory approach and structure to be used for a design certification rule with two or more suppliers of the certified design. In the years after the 1989 Part 52 rulemaking, the Commission did not need to address the circumstance of multiple suppliers of the same certified design (multiple suppliers) to an end user.⁶ However, with the filing of the U.S. ABWR design certification amendment request by STPNOC, as well as Toshiba’s March 3, 2010, letter to the NRC stating that it intends to seek renewal of the U.S. ABWR design certification (ADAMS Accession No. ML100710026), the NRC must now determine the regulatory approach and structure for the amendment (and, for completeness, the renewal) of a certified design where there will be multiple suppliers.

⁶ The term, “user,” means an entity which references the standard design certification rule in its application, and the holder of a permit or license which incorporates the standard design certification.

When the NRC was advised of STPNOC's intent to submit an amendment of the U.S. ABWR design certification, it began a process of identifying and considering possible regulatory alternatives, with the goal of identifying a single regulatory approach and structure to be used for all design certifications with multiple suppliers. The NRC considered three alternatives which it could reasonably select:

1. Separate rules: Develop separate design certification rules for each supplier.
2. Branches: Develop one design certification rule with multiple branches with each branch describing a complete design to be supplied by each supplier.
3. Options: Develop one design certification rule with options with each option describing a portion of the certified design which may be selected by the user as an option to the original "reference" certified design.

Table 1 presents the NRC's current views with respect to the differences between these three alternatives.

In light of the Commission's past practice of protecting the proprietary information and legitimate commercial interests of the original design certification applicant wherever consistent with other applicable law, the NRC believes that it should consider that practice when evaluating possible alternatives for the approach and structure of a design certification rule with multiple suppliers. Upon consideration, the NRC concludes that the "branches" alternative should be adopted as the general approach for all renewals of design certifications and for major design certification amendments. The "branches" alternative: (1) is consistent with all applicable law; (2) protects the proprietary information and legitimate commercial interests of the original design certification applicant (as well as the additional suppliers); and (3) meets the NRC's regulatory concerns. Each of these considerations is discussed separately below.

No statutory or other legal prohibition to the "branches" alternative

There is no statutory or other legal prohibition, explicit or otherwise, against use of the "branches" alternative in the AEA, the Administrative Procedures Act the National Technology

Transfer and Advancement Act, or other statutes applicable to the NRC. Design certification rulemaking is not specifically addressed in the AEA. The AEA provisions do not appear to circumscribe or prohibit the NRC's use of a regulatory approach of approving multiple suppliers of a set of closely related certified designs in a single codified rule. Moreover, nothing in Part 52 compels the use of a particular alternative for addressing multiple suppliers. As discussed previously, the Commission contemplated that multiple suppliers could supply the same certified design from the time it first adopted the concept of design certification by rulemaking. However, the Commission did not mandate any specific regulatory approach for accommodating multiple suppliers of a certified design. Those provisions intended to protect proprietary information and the commercial interests of each supplier do not mandate any specific approach for accommodating multiple suppliers, and do not foreclose the use of the "branches" alternative.

Protection of proprietary information and legitimate commercial interests of all suppliers

The "branches" alternative fully protects the proprietary information and legitimate commercial interests of all suppliers. Under the "branches" alternative, each supplier is responsible for creating and maintaining its own DCD (including the non-public version of the DCD containing SUNSI (including proprietary information) and SGI developed by the supplier). Because each DCD is self-contained, the NRC does not foresee any circumstance that would require the NRC to provide the non-public DCD (or information supporting its DCD) prepared and supported by the original design certification applicant to the new supplier, or to provide the non-public DCD prepared and supported by the new supplier to the original applicant. Nor does the use of the "branches" alternative affect the legal issues associated with providing access to SUNSI (including proprietary information) and SGI to members of the public to facilitate public comment on a proposed design certification rulemaking adding a new supplier and branch.

The "branches" alternative has no effect on the legal applicability, or on the NRC's implementation of the 10 CFR Part 52 and Part 170 provisions discussed previously, which are directed at protecting the proprietary information and commercial interests of the original design

applicant. These provisions, properly applied, should also protect the proprietary information and interests of all other suppliers of a subsequently-approved “branch.” Thus, the “branches” alternative affords all suppliers all of the protection of their proprietary information and commercial interests, which the Commission intended to be provided to these suppliers.

A rulemaking adopting a new “branch” (a “‘branch’ rulemaking”) would not disturb the issue resolution and finality accorded to the original certified design (as amended in any subsequent rulemakings), or to the certified design of any other suppliers in any previously approved branches. Nor would a “branch” rulemaking necessarily require the Commission to consider and address, in the final rulemaking adding the new “branch,” comments on the existing certified design. The NRC believes that each “branch” rulemaking is limited to adding the new “branch” together with requirements and conditions specific to the new “branch.” Therefore, the NRC asserts that: (1) the nuclear safety and other associated matters (severe accident mitigation design alternatives (SAMDA)) resolved in the preceding design certification rulemaking(s) continue to be effective and are not being re-examined in the “branch” rulemaking; and (2) comments on the existing certified design(s) are out-of-scope and should not be considered in the “branch” rulemaking.⁷

The “branches” alternative would not require the original supplier (or indeed any previously-approved supplier) of the certified design to modify their DCD, or incur other costs as part of the “branch” rulemaking. Hence, there is no financial impact upon the pre-existing suppliers. The NRC has not identified any credible argument that could be raised by the original

⁷ If the out-of-scope comment seeking to modify the existing certified design was submitted by the original sponsor of that design, then the NRC believes that the original sponsor should seek an amendment of its certified design in accordance with the design certification amendment process as addressed in 10 CFR 52.57 and 52.59, and 10 CFR 2.800(c) and 10 CFR 2.811 through 2.819 (as well as the procedures common to all petitions for rulemaking in 10 CFR 2.804 through 2.810, as prescribed in 10 CFR 2.800(b)). By contrast, if the out-of-scope comment seeking to modify the existing certified design was submitted by any other entity (e.g., an entity that is not the supplier of that certified design branch), then the staff believes that these comments should be regarded as petitions for rulemaking and processed in accordance with the provisions of 10 CFR 2.800(c) and 10 CFR 2.802 through 2.803 (as well as the procedures common to all petitions for rulemaking in 10 CFR 2.804 through 2.810, as prescribed in 10 CFR 2.800(b)).

design certification applicant that an NRC decision allowing a new supplier to supply the certified design could be the proximate cause of any diminution in the commercial value of the original applicant's certified design. The concept of multiple suppliers of a single certified design is inherent in the concept of design certification by rulemaking. The Commission anticipated multiple suppliers of a single design certification when it was considering the regulatory approach for certification (rulemaking versus licensing), and afforded protection to the original applicant by various provisions of 10 CFR Part 52. This protection was embodied in provisions included in each of the design certification rules issued to date, and these provisions would continue to be included in future design certification rules. Hence, no supplier—including the original design certification applicant—may reasonably claim that the approval of a new “branch” constitutes an unwarranted diminution in the commercial value of the certified design which it sponsored.

NRC's regulatory concerns are met

The NRC believes that any alternative and structure for a design certification rule with multiple suppliers must meet the following regulatory concerns. Any rule amendment (or renewal) which introduces a new supplier must minimize the possibility of re-opening the safety and regulatory conclusions reached by the NRC with respect to previously approved aspects of the design and supplier(s). In addition, if the new supplier is proposing changes to the actual certified design, then the substitute or new portions of the design⁸ must, to the maximum extent practical, be attributable solely to the “sponsoring” supplier, and therefore distinguishable from

⁸ A “substitute” portion of the certified design sponsored by the new supplier serves to replace a discrete portion of a design as sponsored by the original design certification applicant (in other words, the basis for comparison of a new branch must always be the original certified design), but without augmenting or adding a completely new functional capability. By contrast, a “new” portion of the certified design sponsored by the new supplier serves to either: (1) augment a discrete portion of the design as sponsored by the original design certification applicant; or (2) add a completely new functional capability not previously considered and addressed in the original certified design. As an example, the amendment of the ABWR DCR sought by STPNOC would add new functional capabilities—the ability to withstand aircraft impacts of the kind described in the AIA rule, 10 CFR 50.150. Hence, the “changes” sought by STPNOC would be considered “new” portions of the certified design.

the “common” portions of the design which each supplier must support (the “branches” alternative adopting the premise that the supplier must be technically qualified to supply all of the certified design, including the “common” portions).⁹ The regulatory approach and structure must reflect a sound basis for allowing the NRC to make a technical qualifications finding with respect to the supplier. Finally, the approach and structure must allow for imposition of applicable NRC requirements on each supplier, and the legal ability of the NRC to undertake enforcement and regulatory action on each supplier.

The “branches” alternative meets all of these regulatory concerns. By creating a separate branch for the design to be supplied by the new supplier in the rule and requiring the new certified design to be described in a separate DCD created and supported by the new supplier, there is a strong basis for arguing that the certified design(s) already approved by the NRC are not affected and that the issue finality accorded to those certified designs (as controlled by 10 CFR 52.63) continues. Hence, in any rulemaking approving a new branch, the NRC need not consider any comments seeking changes to the existing certified design.

The use of a separate DCD to describe the new certified design, by its very nature serves to distinguish any substitute or new portions of the certified design sponsored only by the new supplier, and make clear that the substitute or new portions are being sponsored solely by the new supplier (because the other branches do not contain any reference to or mention of the substitute or new portions of the design sponsored by the new supplier). The use of a separate DCD describing the entire design is also consistent with the NRC’s position that it must conduct a technical qualifications review of the new supplier, and make a finding that the new supplier is technically qualified to provide the entire certified design. The NRC’s recommendation to use a

⁹ The NRC believes a broad finding of technical qualifications is necessary because the original design certification applicant is under no legal or NRC regulatory obligation (consistent with the concept of providing protection to the proprietary information and legitimate commercial interests of the original supplier) to provide technical support on the “common” portions of the certified design to either the new supplier or a user.

separate DCD, coupled with a structure of the design certification rule language (as codified in one of the appendices to 10 CFR Part 52) that applies common regulatory requirements to all suppliers, allows for the NRC to take regulatory action against any supplier without regard to whether the supplier was the original design certification applicant.

For these reasons, the NRC concluded that its regulatory concerns are met under the “branches” alternative. However, during discussions with STPNOC about the processing of its request to amend the U.S. ABWR design certification, STPNOC proposed that the NRC adopt a process similar to the “options” approach for the STPNOC U.S. ABWR amendment. The STPNOC request was based upon a number of factors which the NRC considered to be unique to STPNOC’s situation. First, under the “branches” approach, STPNOC would have to supply the U.S. ABWR proprietary information (or its equivalent) which was originally developed by GE Nuclear Energy (GE) and approved by the NRC in the original U.S. ABWR design certification rulemaking. While STPNOC has contractual rights from GE Hitachi Nuclear Energy (GEH) to use the GE-developed U.S. ABWR proprietary information for South Texas Project (STP) Units 3 & 4, it does not have the right to supply the GE-developed U.S. ABWR proprietary information to other companies in connection with any other application for a COL that references the certified U.S. ABWR. In addition, neither STPNOC nor its contractors would be in a position to provide complete information to substitute for the GE-developed U.S. ABWR proprietary information in time to support the schedule for issuance of the COLs for STP Units 3 & 4, should they be approved by the NRC. Second, STPNOC indicated that some portion of the GE-developed U.S. ABWR proprietary information relates to fuel design, and STPNOC does not intend to use the GE fuel design for initial operation of STP Units 3 & 4. Rather, STPNOC intends to use another fuel design and obtain NRC approval via an application for a COL amendment (i.e., after the issuance of the COLs). The GE-developed fuel design also would not be used to operate any of the possible six U.S. ABWRs that could be developed under the agreement between Toshiba and Nuclear Innovation North America LLC, which has the right to

develop four U.S. ABWRs in addition to STP Units 3 & 4. Finally, STPNOC indicated that the “options” approach would not be used at renewal; the renewal application Toshiba was developing would reflect the use of the “branches” alternative. (i. e, Toshiba would be seeking approval of and supplying the entire U.S. ABWR design at renewal, including replacement proprietary information). Based on these factors, STPNOC requested that it be considered the supplier for only for that portion of the U.S. ABWR design certification necessary to comply with the AIA, and which is the subject of its amendment request.

Upon consideration, the NRC is proposing to use the “options” approach for the STPNOC amendment of the U.S. ABWR design certification, based on the following considerations. As with the “branches” alternative, there is no statute or NRC regulation prohibiting the use of the “options” approach. Nor is there any provision which prohibits the concurrent use of both alternatives—so long as the NRC is able to articulate a basis for doing so. Moreover, all of the NRC’s safety and regulatory objectives are met. STPNOC is providing sufficient information to determine its technical qualifications¹⁰ to supply the STPNOC-sponsored amendments addressing the AIA rule to third party users (i.e., users other than STPNOC itself). In addition, the NRC believes that there are no insurmountable issues in requiring the user (in most cases, the COL applicant referencing the U.S. ABWR and the STPNOC option) to prepare a single DCD integrating information from both the DCD developed by GE and the DCD developed by STPNOC. The “options” approach also avoids or addresses all of STPNOC’s concerns with the use of the “branches” alternative for its request to amend the U.S. ABWR.

¹⁰ The NRC staff determined that STPNOC and its contractors are technically qualified to perform the design work associated with the amended portion of the ABWR design represented by STPNOC’s application and to supply the amended portion of the ABWR design. However, the NRC staff determined that STPNOC, by itself, is not technically qualified to supply the amended portion of the ABWR design certification represented in STPNOC’s DCD, Revision 1. The NRC is proposing a provision in the amended ABWR DCR to specify that if a COL applicant references the STPNOC option but does not show they are obtaining the design from STPNOC and Toshiba American Nuclear Energy (TANE), acting together, then the COL applicant must demonstrate that the entity supplying the STPNOC option to the applicant possesses the technical qualifications to do so.

STPNOC would not have to develop and submit to the NRC information equivalent to the proprietary information developed by GE to support the STPNOC amendment application. Nor does STPNOC have to demonstrate its technical qualifications to supply the entire U.S. ABWR certified design; it would only have to demonstrate its technical qualifications to supply the STPNOC option. Toshiba will prepare an application for renewal of the U.S. ABWR design certification (with Toshiba being the renewal applicant) that reflects the “branches” approach, and that application is likely to be submitted within the next year. Thus, the STPNOC option would have a limited period of effectiveness, that is, until the renewal of the U.S. ABWR design certification. Finally, the “options” approach fully protects the legitimate proprietary and commercial interests of GE in the original U.S. ABWR design certification.

Based on these considerations, the NRC is proposing to adopt the “options” alternative for the STPNOC amendment of the U.S. ABWR design certification, but will regard the “branches” alternative as the default for all renewals of design certifications and for major design certification amendments. If the NRC receives other limited-scope design certification amendments (similar in scope to the STPNOC amendment request), it will consider whether the “branches” approach or the “options” approach offers the most effective and efficient regulatory option at that time based on the scope of the amendment and the specific circumstances associated with the particular application.

By implementing the “options” approach for the STPNOC U.S. ABWR amendment, a COL applicant that references the U.S. ABWR standard design certification can meet the requirements of the AIA rule by referencing both the GE DCD and the STPNOC DCD or by referencing only the GE DCD and addressing the requirements of the AIA rule separately in its COL application.

Table 1
Differences in Regulatory Treatment of Alternatives for
Addressing Multiple Design Certification Suppliers

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
Summary Description of Alternative	<p>Each supplier's certified design would be contained in a separate design certification rule (separate appendices to 10 CFR Part 52). Thus, there would be multiple rules for the same general design.</p> <p>Single DCD (see below).</p>	<p>Each supplier's certified design would be contained in a single design certification rule (a single appendix to 10 CFR Part 52).</p> <p>Each supplier's design is a complete design, and presented as an alternative or "branch" within the rule.</p>	<p>The original applicant's certified design would be contained in a single design certification rule (a single appendix to 10 CFR Part 52). An "option" represents an alternative to the specified portion(s) of the original applicant's certified design. The supplier of the option would be providing only the portion(s) of the certified design contained within the option.</p> <p>A COL referencing a design with options would obtain the total design from two (or more) suppliers: (i) the main portion of the design from the original applicant (unless the COL applicant demonstrated that another entity was qualified to supply the design); and (ii) the selected design option from the applicable supplier of the option.</p> <p>Two choices for the DCDs (see below).</p>
DCD	<p>One complete DCD for each rule. Rule language would incorporate by reference a single DCD.</p>	<p>Two separate DCDs (one for each supplier), each DCD describing design for that supplier. Rule language would incorporate by reference two DCDs.</p>	<p><u>Choice 1(NRC preferred)</u> Two separate DCDs: (i) original applicant's DCD (no change to document); and (ii) a limited-scope DCD describing only the</p>

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
			<p>information in the option.</p> <p><u>Choice 2</u> Two separate DCDs: (i) original applicant's DCD (no change to document); and (ii) new DCD, prepared by supplier of option, integrating the original certified design with the substitute design description of the option in the appropriate locations.</p>
Identification of Applicant in Rule	Each supplier identified as original applicant in its rule.	<p>The original applicant and the applicant for each branch (each entity constituting a supplier) are identified.</p> <p>NOTE: Original applicant would always be the first branch.</p>	Original applicant and applicant for each "option" (each entity constituting a supplier) are identified.
Technical Content of Application for Amendment	Design information for amended portion of design.	Design information for amended portion of design branch.	<p><u>Original supplier</u> Design information for amended portion of design.</p> <p><u>Supplier of option-initial application for option</u> Design information for amended portion of design.</p> <p><u>Supplier of option-application for amendment to option</u> Design information for amended portion of option.</p>
Technical Content of Application for Renewal	Design information for entire design, necessary to comply with renewal updating in accordance with § 52.57.	Design information for entire design branch, necessary to comply with renewal updating in accordance with § 52.57.	<u>Original supplier</u> Design information for entire design necessary to comply with renewal updating in accordance with § 52.57.

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
			<p><u>Supplier of option</u> NA (Supplier of option may not renew the DCR option. If both the original applicant and the applicant for the option seek renewal, then renewal will be implemented as “branches” under Alternative 2 with two named applicants/suppliers. If the original applicant or the applicant for the option, alone, seeks renewal, then renewal will be implemented as a single rule with one named applicant/supplier.)</p>
<p>Submission of SUNSI (including proprietary information), and SGI (if applicable)</p>	<p><u>Amendment</u></p> <p><u>Original supplier</u> Submit publicly available DCD without new SUNSI (including proprietary information) and SGI and separate DCD with any new SUNSI (including proprietary information) and SGI.</p> <p><u>Additional supplier</u> Submit publicly available DCD without SUNSI (including proprietary information) and SGI, and separate DCD with SUNSI (including</p>	<p><u>Amendment</u></p> <p><u>Original supplier</u> Submit publicly available DCD without new SUNSI (including proprietary information) and SGI, and separate DCD with any new SUNSI (including proprietary information) and SGI.</p> <p><u>Supplier of branch</u> Submit publicly available DCD without SUNSI (including proprietary information) and SGI, and separate DCD with SUNSI (including proprietary information) and SGI that is equivalent to all SUNSI (including proprietary information) and SGI provided by original applicant.</p>	<p><u>Amendment</u></p> <p><u>Original supplier</u> Submit publicly available DCD without new SUNSI (including proprietary information) and SGI, and separate DCD with any new SUNSI (including proprietary information) and SGI.</p> <p><u>Supplier of option</u> Submit publicly available DCD without SUNSI (including proprietary information) and SGI, and separate DCD with SUNSI (including proprietary information) and SGI that is equivalent to that SUNSI (including proprietary information) and SGI provided by original applicant which is within</p>

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
	<p>proprietary information) and SGI that is equivalent to all SUNSI (including proprietary information) and SGI provided by original applicant.</p> <p><u>Renewal</u></p> <p><u>Original supplier</u> Submit publicly available DCD without new SUNSI (including proprietary information) and SGI, and separate DCD with any new SUNSI (including proprietary information) and SGI.</p> <p><u>Additional supplier</u> Submit publicly available DCD without SUNSI (including proprietary information) and SGI, and separate DCD with SUNSI (including proprietary information) and SGI that is equivalent to all SUNSI (including proprietary information) and SGI provided by original applicant (unless previously provided by the non-original</p>	<p><u>Renewal</u></p> <p><u>Original supplier</u> Submit publicly available DCD without new SUNSI (including proprietary information) and SGI, and separate DCD with any new SUNSI (including proprietary information) and SGI.</p> <p><u>Supplier of branch</u> Submit publicly available DCD without SUNSI (including proprietary information) and SGI, and separate DCD with SUNSI (including proprietary information) and SGI that is equivalent to all SUNSI (including proprietary information) and SGI provided by original applicant (unless previously provided by the non-original applicant in an earlier amendment proceeding).</p>	<p>the scope of the amendment, plus any new SUNSI (including proprietary information) and SGI necessary to support the amendment.</p> <p><u>Renewal</u></p> <p><u>Original supplier</u> Submit publicly available DCD without new SUNSI (including proprietary information) and SGI, and separate DCD with any new SUNSI (including proprietary information) and SGI.</p>

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
	applicant in an earlier amendment proceeding).		
Nature and Scope of NRC Safety Review – Amendment	Findings that: (i) portion of design being amended meets current applicable NRC requirements; and (ii) proposed change does not affect previous conclusions in other design areas.	Findings that: (i) portion of design being amended meets current applicable NRC requirements; and (ii) proposed change does not affect previous conclusions in other design areas.	<p><u>Original supplier</u> Findings that: (i) portion of design being amended meets current applicable NRC requirements; and (ii) proposed change does not affect previous conclusions in other design areas.</p> <p><u>Supplier of option</u> Findings that: (i) design proposed to be added as an option, or portion of existing design being amended (as applicable), meets current applicable NRC requirements; (ii) (if applicable) proposed change to an option does not affect previous conclusions in other design areas of the option; and (iii) design proposed to be added as an option, or proposed change to existing option (as applicable) does not affect safety of design areas in the portion of the design supplied by the original supplier.</p>
Nature and Scope of NRC Safety Review – Renewal	Findings that: (i) design complies with AIA Rule, 10 CFR 50.150 (if not already amended); (ii) design complies with all regulations applicable and in effect at time or original certification; (iii) relevant findings	Findings that: (i) design complies with AIA Rule, 10 CFR 50.150 (if not already amended); (ii) design complies with all regulations applicable and in effect at time or original certification; (iii) relevant findings for any changes to the design requested by the supplier, per 10 CFR 52.59(c); and	<p><u>Original supplier</u> Findings that: (i) design complies with AIA Rule, 10 CFR 50.150 (if not already amended); (ii) design complies with all regulations applicable and in effect at time or original certification; (iii) relevant findings for any changes to the design requested by the</p>

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
	for any changes to the design requested by the supplier, per 10 CFR 52.59(c); and (iv) the findings required by 10 CFR 52.59(b) for those changes imposed by the NRC under that section.	relevant findings for changes imposed by the NRC per 10 CFR 52.59(b); and (iv) the findings required by 10 CFR 52.59(b) for those changes imposed by the NRC under that section.	supplier, per 10 CFR 52.59(c); and (iv) the findings required by 10 CFR 52.59(b) for those changes imposed by the NRC under that section. <u>Supplier of option</u> NA (supplier of option would not be allowed to renew the option)
Nature and Scope of NRC Technical Qualifications Review – Initial Supplier Approval	Supplier is technically qualified to provide entire design, including detailed design information.	<u>Original supplier</u> Supplier is technically qualified to provide entire design, including detailed design information. <u>Supplier of branch</u> Supplier is technically qualified to provide entire design, including detailed design information and the equivalent SUNSI (including proprietary information) and SGI.	<u>Original supplier</u> Supplier is technically qualified to provide entire design, including detailed design information. <u>Supplier of option</u> Supplier is technically qualified to provide detailed design information and the equivalent SUNSI (including proprietary information) and SGI, if any, which is within the scope of the amendment.
Nature and Scope of NRC Technical Qualifications Review – Amendment	NA	NA	NA (if amendment is in same area as original option)
Nature and Scope of NRC Technical Qualifications Review – Renewal	None, unless significant change in organization or corporate structure/ownership or information showing a change in circumstances so a supplier no longer has technical qualifications.	None, unless significant change in organization or corporate structure/ownership, or information showing a change in circumstances so a supplier no longer has technical qualifications.	None, unless significant change in organization or corporate structure/ownership, or information showing a change in circumstances so a supplier no longer has technical qualifications. (supplier of option would not be allowed to renew the option unless it was

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
			incorporated into a wholesale renewal of the design certification)
Scope of Comments in Proposed Rule FRN – New Rule or Initial Approval of Branch or Option	Comments on design for new rule (no comment on original DCR)	<u>Original supplier</u> NA (comments on the original supplier’s design would be out-of-scope of a rulemaking proposing to add a branch) <u>Supplier of branch</u> Same as scope of comments on initial approval of a new DCR	<u>Original supplier</u> NA (comments on the original supplier’s design would be out-of-scope of a rulemaking proposing to add an option) <u>Supplier of option</u> (i) Proposed option meets applicable NRC requirements; (ii) proposed option does not affect safety of design areas in the portion of the design supplied by the original supplier.
Scope of Comments in Proposed Rule FRN – Amendment	Whether: (i) changed portion of design meets current applicable NRC requirements; and (ii) changes adversely affect previous conclusions in other design areas.	Whether: (i) changed portion of design branch meets current applicable NRC requirements; and (ii) changes adversely affect previous conclusions in other design areas.	<u>Original supplier</u> Whether: (i) changed portion of design meets current applicable NRC requirements; (ii) changes adversely affect previous conclusions in other design areas; and (iii) changed portion of design requires the NRC to implement conforming changes in the design option. <u>Supplier of option</u> Whether: (i) proposed change to the option meets applicable NRC requirements; (ii) proposed change to the option affects previous conclusions in unchanged portions of the option; and (iii) proposed change to the option affects safety of design areas in the portion of the design

Regulatory Feature	Alternative 1: Separate Rules	Alternative 2: One Rule with Multiple Branches	Alternative 3: One Rule with Options
			supplied by the original supplier.
Scope of Comments in Proposed Rule FRN – Renewal	Consistent with finding that NRC must make at renewal.	Consistent with finding that NRC must make at renewal.	NA (Supplier of option would not be allowed to renew the option)
Part 21 Applicability	Each supplier is responsible for Part 21 compliance with respect to its design.	Each supplier is responsible for Part 21 compliance with respect to its design branch. NOTE: NRC is responsible for advising suppliers of branches of any defects in the portion of the design which was sponsored by another supplier.	<u>Original supplier</u> Responsible for Part 21 compliance with respect to the entire design with the exception of the option(s). <u>Supplier of option</u> Responsible for Part 21 compliance with respect to its option. NOTE: NRC is responsible for advising: (i) suppliers of options of any defects in the design of the original supplier; and (ii) original supplier of any defects in any of the options, for the purpose of the facilitating the original supplier's consideration of the option's defect on the original supplier's design.
Supplier Recordkeeping Responsibilities	Each supplier required to maintain its DCD.	Each supplier required to maintain the DCD representing the branch it sponsored.	<u>Original supplier</u> Maintain the DCD for the entire design. <u>Supplier of option</u> Maintain the DCD for its option.
Mode of Referencing by COL applicant	Reference the selected rule.	Reference one branch of the rule.	Reference the rule with identification of option selected.

NOTES:

1. If there is only a single description in a table cell, then that means that the description applies to all suppliers.
2. For purposes of this table, "supplier" means an entity that: (1) submits an application for a new design certification, an amendment to an existing design certification, or a renewal

for a design certification; and (2) intends to, has offered, or is providing design and engineering services related to the certified design to a license applicant. The information in this table does not apply to petitions for rulemaking under 10 CFR 2.802 submitted by entities who are not acting, do not intend to act, or the NRC believes are not reasonably capable of acting as a “supplier.” “Original supplier” means the supplier who was the original applicant for the design certification.

C. Changes to Appendix A.

1. Introduction (Section I).

The NRC proposes to amend Section I, “Introduction,” to identify STPNOC as the applicant for the amendment of the U.S. ABWR design certification rule to address the AIA rule, 10 CFR 50.150. The portion of the certified design sponsored by STPNOC in this amendment, and which this rulemaking finds STPNOC (acting together with TANE) is technically qualified to supply, is termed the “STPNOC certified design option” or “STPNOC option.” As discussed in greater detail in the section-by-section analysis for Section III, “Scope and Contents,” an applicant or licensee referencing this appendix may use the GE certified design (which was first certified by the NRC in a 1997 rulemaking (62 FR 25800; May 12, 1997)), or both the GE certified design together with the STPNOC option (the GE/STPNOC composite certified design).

The overall purpose of paragraph I of this appendix is to identify the standard plant design that was approved and the applicant for certification of the standard design. Identification of both the original design certification applicant and the applicant for any amendment to the design 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 supplier, then the COL applicant must meet the requirements in paragraph IV.A.4 of this appendix and 10 CFR 52.73. The COL applicant must demonstrate that the alternate supplier is qualified to provide the standard plant design information.

By identifying STPNOC as the applicant for the amendment of the U.S. ABWR design certification rule, the provisions of 10 CFR 52.63 will be given effect whenever a COL applicant references the certified design option sponsored by STPNOC, but does not use STPNOC to supply the design information for this option and instead uses an alternate supplier. In this circumstance, the COL applicant must meet the requirements in paragraph IV.A.4 of this appendix and 10 CFR 52.73 with respect to the STPNOC option (i.e., the COL applicant must demonstrate that the alternate supplier is qualified to provide the certified design information constituting the STPNOC option).

In addition, by identifying STPNOC as the applicant, STPNOC must maintain the generic DCD for the STPNOC option throughout the time this appendix may be referenced by a COL, as required by paragraph X.A.1 of this appendix.

2. Definitions (Section II).

The NRC is proposing to revise the definition of “generic design control document (generic DCD)” in paragraph A in Section II, “Definitions,” to indicate that there will now be two generic DCDs incorporated by reference into this appendix – the DCD for the original U.S. ABWR design certification submitted by GE Nuclear Energy (GE DCD) and the DCD for the amendment to the U.S. ABWR design submitted by STPNOC (STPNOC DCD). The NRC is proposing this change to the definition of “generic DCD” to make it clear that all requirements in this appendix related to the “generic DCD” apply to both the GE DCD and the STPNOC DCD, unless otherwise specified.

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 to specify the relevant plant-specific requirements to applicants and licensees referencing the appendix. To facilitate the maintenance of the master DCDs, the NRC proposes that each application for a standard design certification or amendment

to 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 NRC proposes to incorporate by reference a second DCD into Appendix A of 10 CFR Part 52, i.e., the DCD for the STPNOC option (STPNOC DCD). Under the proposed rule, a reference to a “generic DCD” means, in context, either or both: (i) the DCD for the original U.S. ABWR design certification submitted by GE (GE DCD); and (ii) the STPNOC DCD submitted by STPNOC.

3. 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 present 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 technical specifications into this appendix. The NRC is proposing to redesignate the existing paragraph A regarding the GE DCD as paragraph A.1 and to add a new paragraph A.2 indicating that the STPNOC DCD is also approved for incorporation by reference.

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. The STPNOC DCD was prepared to meet the technical information contents of application requirements for design certifications 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 applicant for the design certification (or amendment to the design certification) must make the generic DCD available upon request after the final rule becomes effective. Therefore, paragraph III.A.2 would identify a STPNOC representative to be contacted to obtain a copy of the STPNOC DCD.

The generic DCD (master copy) for the STPNOC DCD is electronically accessible in ADAMS (Accession No. ML102710198); at the OFR; and at www.regulations.gov by searching under Docket ID NRC-2010-0134. 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 amendment applicant makes a generic change (through NRC 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 NRC would require that the design certification amendment applicant maintain an up-to-date copy of the master DCD under paragraph X.A.1 that includes any generic changes it has made because it is likely that most applicants intending to reference the standard design would obtain the generic DCD from the design certification amendment applicant.

In addition, the NRC is proposing to revise paragraph III.B to add text indicating that an applicant or licensee referencing this appendix may reference either the GE DCD, or both the GE DCD and the STPNOC DCD. An applicant referencing this appendix would be required to indicate in its application and in all necessary supporting documentation which of these two alternatives it is implementing. This information is necessary to support the NRC's review and processing of the license application. A COL applicant that does not reference both the GE DCD and the STPNOC DCD, will be required, in accordance with 10 CFR 50.150(a)(3)(v)(B) to comply with the requirements of 10 CFR 50.150 as part of its COL application.

Paragraphs III.C and III.D 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. The NRC is proposing a minor change to paragraph III.C, which currently states that, if there is a conflict between Tier 1 and Tier 2 of the DCD, then Tier 1 controls. The revised paragraph would state that, if there is a conflict between Tier 1 and Tier 2 of a DCD, then Tier 1 controls. This change is necessary to indicate that this requirement applies to both the GE DCD and the STPNOC DCD.

The NRC is also proposing a change to paragraph III.D. Paragraph III.D establishes the generic DCD as the controlling document in the event of an inconsistency between the DCD and the Final Safety Evaluation Report (FSER) for the certified standard design. The proposed revision would indicate that this is also the case for an inconsistency between the STPNOC DCD and the NRC's associated FSER, referred to as the "AIA FSER."

The NRC is proposing to redesignate current paragraph III.E as proposed paragraph III.F and to add a new paragraph, III.E. Proposed paragraph III.E would state that, if there is a conflict between the design as described in the GE DCD and a design matter which implements the STPNOC certified design option but is not specifically described in the STPNOC DCD, then the GE DCD controls. This paragraph, which would be effective only with respect to the GE/STPNOC composite certified design, addresses the situation when, despite the best efforts of STPNOC and the NRC, there are unintended consequences or unaddressed issues resulting from STPNOC's amendment to the U.S. ABWR design. The NRC would expect the applicant or licensee discovering such issues to notify the NRC and STPNOC so that the issue could be addressed generically (if not reportable under existing NRC requirements such as 10 CFR Part 21, 10 CFR 52.6, 10 CFR 50.72 and 10 CFR 50.73).

4. Additional Requirements and Restrictions (Section IV).

Section IV presents additional requirements and restrictions imposed upon an applicant who references this appendix. Paragraph IV.A presents the information requirements for these

applicants. Paragraph IV.A.3 currently requires the applicant to include, not simply reference, the proprietary and SGI referenced in the U.S. ABWR DCD, or its equivalent, to ensure that the applicant has actual notice of these requirements. The NRC is proposing to revise paragraph IV.A.3 to indicate that a COL applicant must include, in the plant-specific DCD, the proprietary information and SGI referenced in both the GE DCD and the STPNOC DCD, as applicable.

The NRC is also proposing to add a new paragraph IV.A.4 to indicate requirements that must be met in cases where the COL applicant is not using the entity that was the original applicant for the design certification (or amendment) to supply the design for the applicant's use. Proposed paragraph IV.A.4.a would require that a COL applicant referencing this appendix include, as part of its application, a demonstration that an entity other than GE Nuclear Energy is qualified to supply the U.S. ABWR certified design unless GE Nuclear Energy supplies the design for the applicant's use. Proposed paragraph IV.A.4.b would require that a COL applicant referencing the STPNOC certified design option include, as part of its application, a demonstration that an entity other than STPNOC and TANE acting together is qualified to supply the STPNOC certified design option, unless STPNOC and TANE acting together supply the design option for the applicant's use. In cases where a COL applicant is not using GE Nuclear Energy to supply the U.S. ABWR certified design, or is not using STPNOC and TANE acting together to supply the STPNOC certified design option, this information is necessary to support any NRC finding under 10 CFR 52.73(a) that an entity other than the one originally sponsoring the design certification or design certification amendment is qualified to supply the certified design or certified design option.

Under 10 CFR 52.47(a)(7), a design certification applicant is required to include information in its application to demonstrate that it is technically qualified to engage in the proposed activities (e.g., supplying the certified design to license applicants). Based on the NRC's review of the STPNOC application to amend to the U.S. ABWR certified design, the NRC determined that STPNOC and its contractors are technically qualified to perform the design work

associated with the amended portion of the U.S. ABWR design represented by STPNOC's application and to supply the amended portion of the U.S. ABWR design. However, the staff determined that STPNOC, by itself, is not technically qualified to supply the amended portion of the U.S. ABWR design certification represented in STPNOC's DCD. Rather, the staff determined that STPNOC and TANE acting together are qualified to supply the amended portion of the U.S. ABWR design certification represented in STPNOC's DCD. Therefore, the NRC is including paragraph IV.A.4.b to ensure that the basis for the NRC finding of technical qualifications in support of this design certification amendment remains valid.

5. Applicable Regulations (Section V).

The purpose of Section V is to specify the regulations applicable and in effect when the design certification is approved (i.e., as of the date specified in paragraph V.A, which is the date that Appendix A was originally approved by the Commission and signed by the Secretary of the Commission). The NRC is proposing to revise paragraph V.A to indicate that the current text in this paragraph applies to the GE DCD and to add a new paragraph indicating the regulations that apply to the STPNOC DCD (10 CFR Parts 50 and 52), as would be approved by the Commission and signed by the Secretary of the Commission should this amendment to Appendix A be approved. All of the requirements related to the NRC's AIA requirements can be found in 10 CFR Parts 50 and 52.

6. Issue Resolution (Section VI).

The purpose of Section VI is to identify the scope of issues that were resolved by the Commission in the original certification rulemaking and, therefore, are "matters resolved" within the meaning and intent of 10 CFR 52.63(a)(5). Paragraph VI.B presents the scope of issues that may not be challenged as a matter of right in subsequent proceedings and describes the categories of information for which there is issue resolution. Paragraph VI.B.1 provides 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 (ADAMS Accession No.ML101440260),

the Tier 1 and Tier 2 information and the rulemaking record for this appendix are resolved within the meaning of 10 CFR 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 SGI which are intended to be requirements. Paragraph VI.B.2 provides for issue preclusion of proprietary and SGI.

The NRC is proposing to revise paragraphs VI.B.1 and VI.B.2 to redesignate references to the “FSER” as references to the “ABWR FSER,” and references to the “generic DCD” as references to the “GE DCD” to distinguish the FSER and DCD for the original certified design from the FSER and DCD that would be issued to support the STPNOC amendment to the U.S. ABWR design. In addition, this proposed revision would add additional text to paragraph VI.B.1 to identify the information that would be resolved by the Commission in the rulemaking to certify the STPNOC amendment to the U.S. ABWR design.

The NRC is also proposing to revise paragraph VI.B.7, which identifies as resolved all environmental issues concerning severe accident mitigation design alternatives arising under the National Environmental Policy Act of 1969 (NEPA) associated with the information in the NRC’s final environmental assessment for the U.S. ABWR design and Revision 1 of the technical support document for the U.S. ABWR, dated December 1994, for plants referencing this appendix whose site parameters are within those specified in the technical support document. The NRC is proposing to revise this paragraph to also identify as resolved all environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC’s final environmental assessment and Revision 0 of ABWR-LIC-09-621, “Applicant's Supplemental Environmental Report-Amendment to ABWR Standard Design Certification,” for the AIA amendment to the U.S. ABWR design for plants referencing this appendix whose site parameters are within those specified in the technical support document.

Finally, the NRC is proposing to revise paragraph VI.E which provides the procedure for an interested member of the public to obtain access to proprietary and SGI for the U.S. ABWR

design, to request and participate in proceedings identified in paragraph VI.B of this appendix, that is, proceedings involving licenses and applications which reference this appendix. The NRC is proposing to replace the current information in this paragraph with a statement that the NRC will specify at an appropriate time the procedure for interested persons to review 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 proceeding relating to this appendix in which interested persons have a right to request an adjudicatory hearing.

Access to such information would be for the sole purpose of requesting or participating in certain specified hearings, viz., (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 COL references this appendix; and (iii) any other hearing relating to this appendix in which interested persons have the right to request an adjudicatory hearing.

For proceedings where the notice of hearing was published before **[INSERT EFFECTIVE DATE OF RULE]**, the Commission's order governing access to SUNSI and SGI shall be used to govern access to SUNSI (including proprietary information) and SGI on the STPNOC option. For proceedings in which the notice of hearing or opportunity for hearing is published after **[INSERT EFFECTIVE DATE OF RULE]**, paragraph VI.E. applies and governs access to SUNSI (including proprietary information) and SGI for both the original GE certified design, and the STPNOC option; as stated in paragraph VI.E, the NRC will specify the access procedures at an appropriate time.

The NRC expects to follow its current practice of establishing the procedures by order when the notice of hearing is published in the *Federal Register*. (See, e.g., Florida Power and Light Co, Combined License Application for the Turkey Point Units 6 & 7, Notice of Hearing, Opportunity To Petition for Leave To Intervene and Associated Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for

Contention Preparation (75 FR 34777; June 18, 2010); Notice of Receipt of Application for License; Notice of Consideration of Issuance of License; Notice of Hearing and Commission Order and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation; In the Matter of AREVA Enrichment Services, LLC (Eagle Rock Enrichment Facility) (74 FR 38052; July 30, 2009).

In the four currently approved design certifications (10 CFR Part 52, Appendices A through D), paragraph VI.E presents specific directions on how to obtain access to proprietary information and SGI on the design certification in connection with a license application proceeding referencing that design certification rule. The NRC is proposing this change because these provisions were developed before the terrorist events of September 11, 2001. After September 11, 2001, the Congress changed the statutory requirements governing access to SGI, and the NRC revised its rules, procedures, and practices governing control and access to SUNSI and SGI. The NRC now believes that generic direction on obtaining access to SUNSI and SGI is no longer appropriate for newly approved DCRs. Accordingly, the specific requirements governing access to SUNSI and SGI contained in paragraph VI.E of the four currently approved DCRs should not be included in the design certification rule for the U.S. ABWR. Instead, the NRC should specify the procedures to be used for obtaining access at an appropriate time in the COL proceeding referencing the U.S. ABWR DCR. The NRC intends to include this change in any future amendment or renewal of the other existing DCRs. However, the NRC is not planning to initiate rulemaking to change paragraph VI.E of the existing DCRs, to minimize unnecessary resource expenditures by both the original DCR applicant and the NRC.

7. Processes for Changes and Departures (Section VIII).

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

licensees that reference this DCR. 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, are presented in paragraph VIII.B.

Departures from Tier 2 that a licensee may make without prior NRC approval are addressed under paragraph VIII.B.5 (similar to the process in 10 CFR 50.59). The NRC is proposing changes to Section VIII to address the change control process specific to departures from the information required by 10 CFR 52.47(a)(28) to address the NRC's AIA requirements in 10 CFR 50.150. Specifically, the NRC is proposing to revise paragraph VIII.B.5.b to indicate that the criteria in this paragraph for determining if a proposed departure from Tier 2 requires a license amendment do not apply to a proposed departure affecting information required by 10 CFR 52.47(a)(28) to address 10 CFR 50.150. In addition, the NRC is proposing to redesignate paragraphs VIII.B.5.d, B.5.e, and B.5.f as paragraphs VIII.B.5.e, B.5.f, and B.5.g, respectively, and to add a new paragraph VIII.B.5.d. Proposed paragraph VIII.B.5.d would require an applicant or licensee who proposed to depart from the information required by 10 CFR 52.47(a)(28) to be included in the final safety analysis report (FSAR) for the standard design certification to consider the effect of the changed feature or capability on the original assessment required by 10 CFR 50.150(a). The FSAR information required by the aircraft impact rule which is subject to this change control requirement are the descriptions of the design features and functional capabilities incorporated into the final design of the nuclear power facility and the description of how the identified design features and functional capabilities meet the assessment requirements in 10 CFR 50.150(a)(1). The objective of the change controls is to determine whether the design of the facility, as changed or modified, is shown to withstand the effects of the aircraft impact with reduced use of operator actions. In other words, the applicant or licensee must continue to show, with the modified design, that the acceptance criteria in 10 CFR 50.150(a)(1) are met with reduced use of operator actions. The rule does not require an applicant or a licensee implementing a design change to redo the complete aircraft impact

assessment (AIA) to evaluate the effects of the change. The NRC believes it may be possible to demonstrate that a design change is bounded by the original design or that the change provides an equivalent level of protection, without redoing the original assessment.

Consistent with the NRC's intent when it issued the AIA rule, under the proposed revision to this section, plant-specific departures from the AIA information in the FSAR would not require a license amendment, but may be made by the licensee upon compliance with the substantive requirements of the AIA rule (i.e., the AIA rule acceptance criteria). The applicant or licensee would also be required to document, in the plant-specific departure, how the modified design features and functional capabilities continue to meet the assessment requirements in 10 CFR 50.150(a)(1) in accordance with Section X of this appendix. Applicants and licensees making changes to design features or capabilities included in the certified design may also need to develop alternate means to cope with the loss of large areas of the plant from explosions or fires to comply with the requirements in 10 CFR 50.54(hh). The proposed addition of these provisions to this appendix is consistent with the NRC's intent when it issued the AIA rule in 2009, as noted in the statements of consideration for that rule (74 FR 28112; June 12, 2009, at 28122, third column).

8. Records and Reporting (Section X).

The purpose of Section X is to present the requirements that apply to maintaining records of changes to and departures from the generic DCD, which would be reflected in the plant-specific DCD. Section X also presents the requirements for submitting reports (including updates to the plant-specific DCD) to the NRC. Paragraph X.A.1 requires that a generic DCD and the proprietary information and SGI referenced in the generic DCD be maintained by the applicant for this rule. The NRC is proposing to revise paragraph X.A.1 to indicate that there are two applicants for this appendix and that the requirements to maintain a copy of the applicable generic DCD would apply to both the applicant for the original U.S. ABWR certification (GE) and the applicant for the AIA amendment to the U.S. ABWR design (STPNOC). Paragraph X.A.1

would also require the design certification applicant to maintain the proprietary information and SGI referenced in the generic DCD. The NRC is proposing to replace the term “proprietary information” with the broader term “sensitive unclassified non-safeguards information (including proprietary information).” Information categorized as SUNSI is information that is generally not publicly available and encompasses a wide variety of categories including Information about a licensee’s or applicant’s physical protection or material control and accounting program for special nuclear material not otherwise designated as SGI or classified as National Security Information or Restricted Data (security-related information) which is required by 10 CFR 2.390 to be protected in the same manner as commercial or financial information (i.e., they are exempt from public disclosure). This change is necessary because, although the NRC is not approving any proprietary information or SGI as part of this amendment rulemaking, it is approving some security-related information that is categorized as SUNSI.

This change would ensure that both GE and STPNOC (as well as any future applicants for amendments to the U.S. ABWR DCR who intend to supply the certified design) are required to maintain a copy of the applicable generic DCD, and maintain the applicable SUNSI (including proprietary information) and SGI – developed by that applicant – that were approved as part of the relevant design certification rulemakings. In the certification of the original U.S. ABWR design, the NRC approved both proprietary information and SGI as part of the design certification rulemaking. In this amendment to the U.S. ABWR design, the NRC would only be approving non-proprietary SUNSI as part of the amendment rulemaking.

The NRC notes that the generic DCD concept was developed, in part, to meet OFR requirements for incorporation by reference, including public availability of documents incorporated by reference. However, the proprietary information and SGI were not included in the public version of the DCD prepared by GE, and the SUNSI was not included in the public version of the DCD prepared by STPNOC. Only the public version of the generic STPNOC DCD would be identified and incorporated by reference into this rule. Nonetheless, the SUNSI for the

STPNOC option 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 in the non-public versions of the GE and STPNOC DCDs, this SUNSI (including proprietary information) and SGI, or its equivalent, is required to be provided by an applicant for a license referencing this DCR.

In addition, the NRC is proposing to add a new paragraph X.A.4.a that would require the applicant for the amendment to the U.S. ABWR design to address the AIA requirements to maintain a copy of the AIA performed to comply with the requirements of 10 CFR 50.150(a) for the term of the certification (including any period of renewal). The NRC is also proposing a new paragraph X.A.4.b that would require an applicant or licensee who references this appendix to include both the GE DCD and the STPNOC DCD to maintain a copy of the AIA performed to comply with the requirements of 10 CFR 50.150(a) throughout the pendency of the application and for the term of the license (including any period of renewal). The addition of paragraphs X.A.4.a and X.A.4.b is consistent with the NRC's intent when it issued the AIA rule in 2009 (74 FR 28112; June 12, 2009, at 28121, second column).

IV. Section-by-Section Analysis

A. Introduction (Section I)

The NRC is proposing to amend Section I, "Introduction," to identify STPNOC as the applicant for the amendment of the U.S. ABWR design certification rule to address the AIA rule, 10 CFR 50.150.

B. Definitions (Section II)

The NRC is proposing to revise the definition of "generic design control document (generic DCD)" to indicate that there will be two generic DCDs incorporated by reference into this appendix – the DCD for the original U.S. ABWR design certification submitted by GE Nuclear Energy (GE DCD) and the DCD for the amendment to the U.S. ABWR design submitted by STPNOC (STPNOC DCD). This will make it clear that all requirements in this appendix

related to the “generic DCD” apply to both the GE DCD and the STPNOC DCD, unless otherwise specified.

C. Scope and Contents (Section III)

The NRC is proposing to redesignate existing paragraph A regarding the GE DCD as paragraph A.1 and to add a new paragraph A.2 indicating that the STPNOC DCD is also approved for incorporation by reference into 10 CFR Part 52, Appendix A by OFR.

The NRC is proposing to revise paragraph III.B to add text indicating that an applicant or licensee referencing this appendix may use either the GE DCD, or both the GE DCD and the STPNOC DCD. By doing so, the applicant or licensee effectively indicates which generic design it is using (i.e., the GE certified design, or the GE/STPNOC composite certified design). An applicant referencing this appendix would be required to indicate in its application and in all necessary supporting documentation which of these two alternatives it is implementing.

The NRC is proposing a minor change to paragraph III.C, which currently states that, if there is a conflict between Tier 1 and Tier 2 of the DCD, then Tier 1 controls. The revised paragraph would state that, if there is a conflict between Tier 1 and Tier 2 of a DCD, then Tier 1 controls, because the requirement would also apply to the STPNOC DCD.

Paragraph III.D establishes the generic DCD as the controlling document in the event of an inconsistency between the DCD and the FSER for the certified standard design. The NRC is proposing a change to paragraph III.D which would indicate that in the event of an inconsistency between the STPNOC DCD and the AIA FSER, the STPNOC DCD controls.

The NRC is proposing to redesignate current paragraph III.E as proposed paragraph III.F and to add a new paragraph III.E. Proposed paragraph III.E would state that, if there is a conflict between the design as described in the GE DCD and a design matter which implements the STPNOC certified design option but is not specifically described in the STPNOC DCD, then the GE DCD controls.

D. Additional Requirements and Restrictions (Section IV)

The NRC is proposing to revise paragraph IV.A.3 to indicate that a COL applicant must include, in the plant-specific DCD, the proprietary information and SGI referenced in both the GE DCD and the STPNOC DCD, as applicable, or its equivalent.

Section IV presents additional requirements and restrictions imposed upon an applicant who references this appendix. Paragraph IV.A presents the information requirements for these applicants. Paragraph IV.A.3 requires the applicant to include the proprietary information and SGI referenced in the DCD, or its equivalent, to ensure that the applicant has actual notice of these requirements. The NRC is proposing to revise paragraph IV.A.3 to indicate that a COL applicant must include, in the plant-specific DCD, the proprietary information and SGI referenced in both the GE DCD and the STPNOC DCD, as applicable, or the equivalent of this information. If the COL applicant is referencing only the GE DC, then the applicant must include the proprietary information and SGI developed by GE (as presented in the non-public version of the GE DCD), or the equivalent of this information. If the COL applicant is referencing both the GE DCD and the STPNOC DCD, then the applicant must include: (1) the proprietary information and SGI developed by GE (as presented in the non-public version of the GE DCD), or the equivalent of this information; and (2) the proprietary information and SGI developed by STPNOC (as presented in the non public version of the STPNOC DCD), or the equivalent of this information.

The NRC is also proposing to add a new paragraph IV.A.4 to indicate requirements that must be met in cases where the COL applicant is not using the entity that was the original applicant for the design certification (or amendment) to supply the design for the applicant's use. Proposed paragraph IV.A.4.a would require that a COL applicant referencing this appendix include, as part of its application, a demonstration that an entity other than GE is qualified to supply the U.S. ABWR certified design unless GE supplies the design for the applicant's use. Proposed paragraph IV.A.4.b would require that a COL applicant referencing the STPNOC

certified design option include, as part of its application, a demonstration that an entity other than STPNOC and TANE acting together is qualified to supply the STPNOC certified design option, unless STPNOC and TANE acting together supply the design option for the applicant's use. In cases where a COL applicant is not using GE to supply the U.S. ABWR certified design, or is not using STPNOC and TANE acting together to supply the STPNOC certified design option, the required information would be used to support any NRC finding under 10 CFR 52.73(a) that an entity other than the one originally sponsoring the design certification or design certification amendment is qualified to supply the certified design or certified design option.

E. Applicable Regulations (Section V)

Paragraph V.A would be revised so that the first sentence of paragraph V.A identifies the applicable regulations for the GE certified design, and the second sentence presents the applicable regulations for the STPNOC Option.

F. Issue Resolution (Section VI)

The NRC is proposing to revise paragraphs VI.B.1 and VI.B.2 to redesignate references to the "FSER" as references to the "ABWR FSER" and references to the "generic DCD" as references to the "GE DCD" to distinguish the FSER and DCD for the original certified design from the FSER and DCD that would be issued to support the STPNOC amendment to the U.S. ABWR design. In addition, this proposed revision would add text to paragraph VI.B.1 to identify the information that would be resolved by the Commission in the rulemaking to certify the STPNOC AIA amendment to the U.S. ABWR design.

The NRC is proposing to revise paragraph VI.B.7 to identify as resolved all environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's final environmental assessment and Revision 0 of ABWR-LIC-09-621, "Applicant's Supplemental Environmental Report-Amendment to ABWR Standard Design Certification," for the AIA amendment to the U.S. ABWR design for plants referencing this appendix whose site parameters are within those specified in the technical support document.

The existing site parameters specified in the technical support document are not affected by this design certification amendment.

G. Processes for Changes and Departures (Section VIII)

The NRC is proposing changes to Section VIII to address the change control process specific to departures from the information required by 10 CFR 52.47(a)(28) to address the NRC's AIA requirements in 10 CFR 50.150. Specifically, the NRC is proposing to revise paragraph VIII.B.5.b to indicate that the criteria in this paragraph for determining if a proposed departure from Tier 2 requires a license amendment do not apply to a proposed departure affecting information required by 10 CFR 52.47(a)(28) to address aircraft impacts.

In addition, the NRC is proposing to redesignate paragraphs VIII.B.5.d, B.5.e, and B.5.f as paragraphs VIII.B.5.e, B.5.f, and B.5.g, respectively, and to add a new paragraph VIII.B.5.d. Proposed paragraph VIII.B.5.d would require an applicant referencing the U.S. ABWR DCR, who proposed to depart from the information required by 10 CFR 52.47(a)(28) to be included in the FSAR for the standard design certification, to consider the effect of the changed feature or capability on the original 10 CFR 50.150(a) assessment.

H. Records and Reporting (Section X)

The NRC is proposing to revise paragraph X.A.1 to refer to "applicants" for this appendix and to replace the term "proprietary information" with the broader term "sensitive unclassified non-safeguards information." Paragraph X.A.1 would be revised to require the design certification amendment applicant to maintain the SUNSI which it developed and used to support its design certification amendment application. This would ensure that the referencing applicant has direct access to this information from the design certification amendment applicant, if it has contracted with the applicant to provide the SUNSI to support its license application. The STPNOC generic DCD and the NRC-approved version of the SUNSI would be required to be maintained for the period that this appendix may be referenced.

The NRC is also proposing to add a new paragraph X.A.4.a that would require STPNOC to maintain a copy of the AIA performed to comply with the requirements of 10 CFR 50.150(a) for the term of the certification (including any period of renewal). This proposed provision, which is consistent with 10 CFR 50.150(c)(3), would facilitate any NRC inspections of the assessment that the NRC decides to conduct.

Similarly, the NRC is proposing new paragraph X.A.4.b that would require an applicant or licensee who references this appendix, to include both the GE DCD and the STPNOC DCD, to maintain a copy of the AIA performed to comply with the requirements of 10 CFR 50.150(a) throughout the pendency of the application and for the term of the license (including any period of renewal). This provision is consistent with 10 CFR 50.150(c)(4). For all applicants and licensees, the supporting documentation retained onsite should describe the methodology used in performing the assessment, including the identification of potential design features and functional capabilities to show that the acceptance criteria in 10 CFR 50.150(a)(1) would be met.

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. To access documents related to this action, see Section I, "Submitting Comments and Accessing Information" of this document.

Document	PDR	Web	ADAMS
SECY-10-XXXX, "Proposed Rule - U.S. Advanced Boiling Water Reactor Aircraft Impact Design Certification Amendment"	x	x	ML102030495
STPNOC Application to Amend the Design Certification Rule for the U.S. ABWR	x	x	ML092040048
ABWR STP AIA Amendment Design Control Document, Revision 3 (public version)	x	ML102770376
Applicant's Supplemental Environmental Report – Amendment to the ABWR Standard Design Certification	x	x	ML093170455
Final Safety Evaluation Report for the STPNOC Amendment to the ABWR Design Certification	x	ML102710198
Environmental Assessment by the U.S. NRC Relating to the Certification of the STPNOC Amendment to the U.S. ABWR Standard Plant Design	x	ML102030505
Regulatory History of Design Certification ¹¹	x	ML003761550

VII. Procedures for Access to Sensitive Unclassified Non-Safeguards Information for Preparation of Comments on the Proposed Amendment to the U.S. ABWR Design Certification

This section contains instructions regarding how interested persons who wish to comment on the proposed design certification amendment may request access to documents containing SUNSI to prepare their comments.

¹¹ The regulatory history of the NRC's design certification reviews is a package of documents that is available in NRC's PDR and ADAMS. 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.

Submitting a request to the NRC

Within 10 days after publication of this document, an individual or entity (hereinafter, the “requester”) may request access to such information. Requests for access to SUNSI submitted more than 10 days after publication of this document will not be considered absent a showing of good cause for the late filing explaining why the request could not have been filed earlier.

The requester shall submit a letter requesting permission to access SUNSI to the Office of the Secretary, U.S. Nuclear Regulatory Commission, Attention: Rulemakings and Adjudications Staff, Washington, DC 20555-0001. The expedited delivery or courier mail address is: Office of the Secretary, U.S. Nuclear Regulatory Commission, Attention: Rulemakings and Adjudications Staff, 11555 Rockville Pike, Rockville, MD. The e-mail address for the Office of the Secretary is rulemaking.comments@nrc.gov. The requester must send a copy of the request to the design certification applicant at the same time as the original transmission to the NRC using the same method of transmission. Copies of the request to the applicant must be sent to Mr. Scott M. Head, Regulatory Affairs Manager, South Texas Project Nuclear Operating Company, P.O. Box 289, Wadsworth, TX 77483, or to smhead@STPEGS.com. For purposes of complying with this requirement, a “request” includes all the information required to be submitted to the NRC as presented in this section.

The request must include the following information:

1. The name of this design certification amendment at the top of the first page of the request, and a citation to this document.
2. The name, address, and e-mail or FAX number of the requester. If the requester is an entity, the name of the individual(s) to whom access is to be provided, then the address and e-mail or FAX number for each individual, and a statement of the authority granted by the entity to each individual to review the information and to prepare comments on behalf of the entity must be provided. If the requester is relying upon another individual to evaluate the requested

SUNSI and prepare comments, then the name, affiliation, address, and e-mail or FAX number for that individual must be provided.

3. The requester's need for the information to prepare meaningful comments on the proposed design certification must be demonstrated. Each of the following areas must be addressed with specificity.

(a) The specific issue or subject matter on which the requester wishes to comment;

(b) An explanation why information which is publicly available, including the publicly available versions of the application and design control document, and information on the NRC's docket for the design certification application is insufficient to provide the basis for developing meaningful comment on the proposed design certification with respect to the issue or subject matter described previously in paragraph 3(a); and

(c) Information demonstrating that the individual to whom access is to be provided has the technical competence (demonstrable knowledge, skill, experience, education, training or certification) to understand and use (or evaluate) the requested information in order to develop meaningful comments on the proposed design certification with respect to the issue or subject matter described in paragraph 3(a) above.

4. Based on an evaluation of the information submitted under paragraph 3 of this section, the NRC staff will determine within 10 days of receipt of the written access request whether the requester has established a legitimate need for the SUNSI access requested.

5. If the NRC staff determines that the requester has established a legitimate need for access to SUNSI, the NRC staff will notify the requester in writing that access to SUNSI has been granted.

The written notification to the requester will contain instructions on how the requester may obtain copies of the requested documents, and any other conditions that may apply to access to those documents. These conditions will include, but are not necessarily limited to, the

signing of a protective order presenting terms and conditions to prevent the unauthorized or inadvertent disclosure of SUNSI by each individual who will be granted access to SUNSI. Claims that the provisions of such a protective order have not been complied with may be filed by calling NRC's toll-free safety hotline at (800) 695-7403. Please note that calls to this number are not recorded between the hours of 7:00 a.m. to 5:00 p.m. Eastern Time. However, calls received outside these hours are answered by the Incident Response Operations Center on a recorded line. Claims may also be filed via e-mail to NRO_Allegations@nrc.gov, or may be sent in writing to the U.S. Nuclear Regulatory Commission, Attention: N. Rivera-Feliciano, Mail Stop T7-D24, Washington, DC 20555-0001.

6. Any comments in this rulemaking proceeding that are based upon the disclosed SUNSI must be filed by the requester no later than 25 days after receipt of (or access to) that information, or the close of the public comment period, whichever is later. The commenter must comply with the NRC requirements regarding the submission of SUNSI to the NRC when submitting comments to the NRC (including marking and transmission requirements).

7. Review of Denials of Access.

(a) If the request for access to SUNSI is denied by the NRC staff, the staff shall promptly notify the requester in writing, briefly stating the reason or reasons for the denial.

(b) Appeals from a denial of access must be made to the Executive Director for Operations (EDO) in accordance with 10 CFR 9.29. The decision of the EDO constitutes final agency action, as provided in 10 CFR 9.29(d).

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. The NRC proposes to approve the AIA amendment to the U.S. ABWR standard plant design for use in nuclear power plant licensing under 10 CFR Part 50 or 52. Design certifications (and amendments thereto) are not generic rulemakings establishing a generally applicable standard with which all 10 CFR Parts 50 and 52 nuclear power plant licensees must comply. Design certifications (and amendments thereto) are Commission approvals of specific nuclear power plant designs by rulemaking. Furthermore, design certifications (and amendments thereto) 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 draft environmental assessment (EA), is that that the Commission has made a generic determination under 10 CFR 51.32(b)(2) that there is no significant environmental impact associated with the issuance of an amendment to a design certification.

This amendment to 10 CFR Part 52 would not authorize the siting, construction, or operation of a facility using the AIA amendment to the U.S. ABWR design; it would only codify the AIA amendment to the U.S. ABWR 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 AIA amendment to the U.S. ABWR design certification rule.

In addition, as part of the draft EA for the AIA amendment to the U.S. ABWR design, the NRC reviewed STPNOC's evaluation of various design alternatives to prevent and mitigate severe accidents in Revision 0 of ABWR-LIC-09-621, "Applicant's Supplemental Environmental Report-Amendment to ABWR Standard Design Certification." According to 10 CFR 51.30(d), an EA for a design certification amendment is limited to the consideration of whether the design change which is the subject of the proposed amendment renders a severe accident mitigation design alternative (SAMDA) previously rejected in the earlier EA to become cost beneficial, or results in the identification of new SAMDAs, in which case the costs and benefits of new SAMDAs and the bases for not incorporating new SAMDAs in the design certification must be addressed. Based upon review of STPNOC's evaluation, the Commission concludes that the proposed design changes (1) do not cause a SAMDA previously rejected in the environmental assessment for the original U.S. ABWR design certification to become cost-beneficial; and (2) do not result in the identification of any new SAMDAs that could become cost beneficial.

The Commission is requesting comment on the draft EA. As provided in 10 CFR 51.31(b), comments on the draft EA will be limited to the consideration of SAMDAs as required by 10 CFR 51.30(d). The Commission will prepare a final EA following the close of the comment period for the proposed standard design certification. If a final rule is issued, all environmental issues concerning SAMDAs associated with the information in the final EA and Revision 0 of ABWR-LIC-09-621, "Applicant's Supplemental Environmental Report-Amendment to ABWR

Standard Design Certification,” will be considered resolved for plants referencing the AIA amendment to the U.S. ABWR design whose site parameters are within those specified in Revision 1 of the technical support document for the U.S. ABWR, dated December 1994. The existing site parameters specified in the technical support document are not affected by this design certification amendment.

The draft EA, upon which the Commission’s finding of no significant impact is based, and the STPNOC DCD are available for examination and copying at the NRC’s Public Document Room (PDR), One White Flint North, 11555 Rockville Pike, Room O-1 F21, Rockville, Maryland.

XI. Paperwork Reduction Act Statement

This proposed rule contains new or amended information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq). This rule has been submitted to the Office of Management and Budget (OMB) for review and approval of the information collection requirements.

Type of submission, new or revision: Revision.

The title of the information collection: 10 CFR Part 52, Advanced Boiling Water Reactor Aircraft Impact Design Certification Amendment.

The form number if applicable: N/A.

How often the collection is required: On occasion. Reports required under 10 CFR Part 52, Appendix A, paragraph IV.A.4, are collected and evaluated once, when licensing action is sought on a combined license application referencing the U.S. ABWR design and the combined license applicant is not using the entity that was the original applicant for the design certification, or amendment, to supply the design for the license applicant’s use.

Who will be required or asked to report: Combined license applicants.

An estimate of the number of annual responses: 2 (0 annual responses plus 2 recordkeepers).

The estimated number of annual respondents: 2

An estimate of the total number of hours needed annually to complete the requirement or request: 6 hours (0 hours reporting and 6 hours recordkeeping).

Abstract: The NRC proposes to amend its regulations to certify an amendment to the U.S. ABWR standard plant design to comply with 10 CFR 50.150, "Aircraft Impact Assessment." This action will allow applicants or licensees intending to construct and operate a U.S. ABWR to comply with 10 CFR 50.150 by referencing the amended DCR.

The NRC is seeking public comment on the potential impact of the information collections contained in this proposed rule (or proposed policy statement) and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?
2. Is the estimate of burden accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the information collection be minimized, including the use of automated collection techniques?

A copy of the OMB clearance package may be viewed free of charge at the NRC's PDR, One White Flint North, 11555 Rockville Pike, Room O-1 F21, Rockville, Maryland. The OMB clearance package and rule are available at the NRC worldwide Web site: <http://www.nrc.gov/public-involve/doc-comment/omb/index.html> for 60 days after the signature date of this notice.

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 Information Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to INFOCOLLECTS.Resource@NRC.GOV and to the Desk Officer, Christine Kymn, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0151), Office of Management and Budget, Washington, DC 20503. Comments on the proposed information collection may also be submitted via the Federal eRulemaking Portal <http://www.regulations.gov>, Docket ID NRC-2010-0134. 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. You may also e-mail comments to [Christine J. Kymn@omb.eop.gov](mailto:Christine.J.Kymn@omb.eop.gov) or comment by telephone at (202) 395-4638.

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 (and amendments thereto) are not generic rulemakings in the sense that design certifications (and amendments thereto) do not establish standards or requirements with which all licensees must comply. Rather, design certifications (and amendments thereto) 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 (or

amendments thereto), 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 Act 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 an amendment to a nuclear power plant design. Neither the design certification amendment applicant, nor prospective nuclear power plant licensees who reference this design certification rule, fall within the scope of the definition of “small entities” presented in the Regulatory Flexibility Act, or the size standards 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 amendment 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 D of 10 CFR Part 52. Therefore, a backfit analysis was not prepared for this rule.

The proposed rule does not constitute backfitting as defined in the backfit rule (10 CFR 50.109) with respect to either operating licenses under 10 CFR Part 50 because there are no operating licenses referencing this design certification rule. The proposed rule does not constitute backfitting as defined in the backfit rule or otherwise impose requirements inconsistent with the applicable finality requirements under 10 CFR Part 52 (10 CFR 52.63, 52.83 and 52.98) because: (i) there are no COLs issued by the NRC referencing this rule, and (ii) neither the

backfit rule nor the finality provisions in 10 CFR Part 52 protect COL applicants from changes in NRC requirements which may occur during the pendency of their application before the NRC.

The proposed rule is not inconsistent with the finality requirements in 10 CFR 52.63 as applied to COLs. The proposed rule would establish an option to the existing design certification rule which addresses the requirements of the AIA rule. A COL referencing the U.S. ABWR design certification rule may voluntarily choose to select the STPNOC option, or may choose to reference the U.S. ABWR design without selecting the STPNOC option.

The AIA rule itself mandated that the U.S. ABWR DCR be revised (either during the DCR's current term or no later than its renewal) to address the requirements of the AIA rule. The AIA rule may therefore be regarded as inconsistent with applicable finality provisions in 10 CFR Part 52 and Section VI of the U.S. ABWR DCR. However, the NRC provided an administrative exemption from these finality requirements when the final AIA rule was issued. See 74 FR 28112; June 12, 2009, at 28143-45. Accordingly, the NRC has already addressed the backfitting implications of applying the AIA rule to the U.S. ABWR.

Because the proposed rule does not constitute backfitting and is not otherwise inconsistent with finality provisions in 10 CFR Part 52, the NRC has not prepared a backfit analysis or documented evaluation 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, Incorporation by reference, 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. 553; 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. Section I of Appendix A to 10 CFR Part 52 is revised to read as follows:

I. Introduction

Appendix A constitutes the standard design certification for the U.S. Advanced Boiling Water Reactor (ABWR) design, in accordance with 10 CFR Part 52, Subpart B. The applicant for the original certification of the U.S. ABWR design was GE Nuclear Energy (GE).

The applicant for the amendment to the U.S. ABWR design to address the requirements in 10 CFR 50.150, “Aircraft impact assessment,” (AIA rule) is the South Texas Project Nuclear Operating Company (STPNOC).

3. In Section II of Appendix A to 10 CFR Part 52, paragraph A is revised to read as follows:

II. Definitions

A. *Generic design control document (generic DCD)* means either or both of the documents containing the Tier 1 and Tier 2 information and generic technical specifications that are incorporated by reference into this appendix.

* * * * *

4. Section III of Appendix A to 10 CFR Part 52 is revised to read as follows:

III. Scope and Contents

A.1. Tier 1, Tier 2, and the generic technical specifications in the U.S. ABWR Design Control Document, GE Nuclear Energy, Revision 4 dated March 1997 (GE DCD), are approved for incorporation by reference by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the generic DCD may be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. A copy is available for examination and copying at the NRC Public Document Room (PDR) located at One White Flint North, 11555 Rockville Pike, Room O-1 F21, Rockville, Maryland. Copies are also available for examination at the NRC Library located at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, and the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

2. Tier 1 and Tier 2 information in the ABWR STP Aircraft Impact Assessment Amendment Design Control Document (Revision 3, dated September 23, 2010) (STPNOC DCD), is approved for incorporation by reference by the Director of the Office 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 the Regulatory Affairs Manager, South Texas Project Nuclear Operating Company, P.O. Box 289, Wadsworth, Texas 77483. A copy of the generic DCD is also available for examination and copying at the NRC PDR, Room O-1 F21, 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.RESOURCE@NRC.GOV. The generic DCD can also be viewed on the Federal Rulemaking Web site <http://www.regulations.gov> by searching for documents filed under Docket ID NRC-2010-0134 or in the NRC's Electronic Reading Room at

<http://www.nrc.gov/reading-rm/adams.html> by searching under ADAMS Accession No.

ML102710198. All approved material is also 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/cfr/ibr-locations.html>.

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, and the generic technical specifications except as otherwise provided in this appendix. An applicant or licensee referencing this appendix may reference either the GE DCD, or both the GE DCD and the STPNOC DCD. An applicant referencing this appendix shall indicate in its application and in all necessary supporting documentation which of these two options it is implementing.

Conceptual design information, as set forth in the generic DCD, and the “Technical Support Document for the ABWR” are not part of this appendix. Tier 2 references to the probabilistic risk assessment (PRA) in the ABWR standard safety analysis report do not incorporate the PRA into Tier 2.

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

D. If there is a conflict between the generic DCD and the application for design certification of the U.S. ABWR design, NUREG–1503, “Final Safety Evaluation Report related to the Certification of the Advanced Boiling Water Reactor Design” (ABWR FSER), and Supplement No. 1, or NUREG-XXXX “Final Safety Evaluation Report related to the Certification of the AIA Amendment to the ABWR Design” (AIA FSER), then the generic DCD controls.

E. If there is a conflict between the design as described in the GE DCD and a design matter which implements the STPNOC certified design option but is not specifically described in the STPNOC DCD, then the GE DCD controls.

F. 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.

5. In Section IV of Appendix A to 10 CFR Part 52, paragraph A.3 is revised, and new paragraph A.4 is added to read as follows:

IV. Additional Requirements and Restrictions

A. * * *

3. Include, in the plant-specific DCD, the sensitive unclassified non-safeguards information (including proprietary information) and safeguards information referenced in the GE DCD and the STPNOC DCD, as applicable.

4.a. Include, as part of its application, a demonstration that an entity other than GE Nuclear Energy is qualified to supply the U.S. ABWR certified design unless GE Nuclear Energy supplies the design for the applicant's use.

b. For an applicant referencing the STPNOC certified design option, include, as part of its application, a demonstration that an entity other than STPNOC and TANE acting together is qualified to supply the STPNOC certified design option, unless STPNOC and TANE acting together supply the design option for the applicant's use.

* * * * *

6. In Section V of Appendix A to 10 CFR Part 52, paragraph A is revised to read as follows:

V. Applicable Regulations

A.1. Except as indicated in paragraph B of this section, the regulations that apply to the U.S. ABWR design as contained in the GE DCD are in 10 CFR Parts 20, 50, 73, and 100, codified as of May 2, 1997, that are applicable and technically relevant, as described in the FSER (NUREG-1503) and Supplement No. 1.

2. Except as indicated in paragraph B of this section, the regulations that apply to the U.S. ABWR design as contained in the STPNOC DCD are in 10 CFR Parts 50, and 52, codified as of **[insert date final rule published in the *Federal Register*]**, that are applicable and technically relevant, as described in the FSER on the STPNOC amendment addressing the AIA rule (NUREG–XXXX).

* * * * *

7. In Section VI of Appendix A to 10 CFR Part 52, paragraphs B and E are revised to read as follows:

VI. Issue Resolution

* * * * *

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 combined license, amendment of a combined license, or renewal of a combined license, proceedings held under 10 CFR 52.103, and enforcement proceedings involving plants referencing this appendix:

1. All nuclear safety issues, except for the generic technical specifications and other operational requirements, associated with the information in the ABWR FSER and Supplement No. 1, Tier 1, Tier 2 (including referenced information which the context indicates is intended as requirements), and the rulemaking record for the original certification of the U.S. ABWR design and all nuclear safety issues, except for other operational requirements associated with the information in the AIA FSER, Tier 1, Tier 2 (including referenced information which the context indicates is intended as requirements), and the rulemaking record for certification of the AIA amendment to the U.S. ABWR design;

2. All nuclear safety and safeguards issues associated with the referenced sensitive unclassified non-safeguards information (including proprietary information) and safeguards

information which, in context, are intended as requirements in the GE DCD and the STPNOC DCD;

3. All generic changes to the DCD under and in compliance with the change processes in Sections 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 Sections 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 pursuant to 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 final environmental assessment for the U.S. ABWR design and Revision 1 of the technical support document for the U.S. ABWR, dated December 1994, and for the NRC's final environmental assessment and Revision 0 of ABWR-LIC-09-621, "Applicant's Supplemental Environmental Report-Amendment to ABWR Standard Design Certification," for the AIA amendment to the U.S. ABWR design for plants referencing this appendix whose site parameters are within those specified in the technical support document.

* * * * *

E. The NRC will specify at an appropriate time the procedures to be used by an interested person who wishes to review sensitive, unclassified non-safeguards information (SUNSI) (including proprietary information¹), or Safeguards Information (SGI) for the U.S. ABWR certified design (including the STPNOC option), for the purpose of participating in the hearing

¹ Proprietary information includes trade secrets and commercial or financial information obtained from a person that are privileged or confidential (10 CFR 2.390 and 10 CFR Part 9).

required by 10 CFR 52.85, the hearing provided under 10 CFR 52.103, or in any other proceeding relating to this appendix in which interested persons have a right to request an adjudicatory hearing.

8. In Section VIII of Appendix A to 10 CFR Part 52, paragraph B.5.b is revised, paragraphs B.5.d, B.5.e, and B.5.f are redesignated as paragraphs B.5.e, B.5.f, and B.5.g, respectively, and new paragraph B.5.d is added to read as follows:

VIII. Processes for Changes and Departures

* * * * *

B. * * *

5. * * *

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 10 CFR 50.150, requires a license amendment if it would:

* * * * *

d. If an applicant or licensee proposes to depart from the information required by 10 CFR 52.47(a)(28) to be included in the FSAR for the standard design certification, then the applicant or licensee shall consider the effect of the changed feature or capability on the original assessment required by 10 CFR 50.150(a). The applicant or licensee must also document how the modified design features and functional capabilities continue to meet the assessment requirements in 10 CFR 50.150(a)(1) in accordance with Section X of this appendix.

* * * * *

9. In Section X of Appendix A to 10 CFR Part 52, paragraph A.1 is revised and new paragraph A.4 is added to read as follows:

X. Records and Reporting

A. * * *

1. The applicants for this appendix shall maintain a copy of the applicable generic DCD that includes all generic changes to Tier 1, Tier 2, and the generic technical specifications and other operational requirements. The applicants shall maintain the sensitive unclassified non-safeguards information (including proprietary information) and safeguards information referenced in the applicable generic DCD for the period that this appendix may be referenced, as specified in Section VII of this appendix.

* * * * *

4.a. The applicant for the amendment to the U.S. ABWR design to address the requirements in 10 CFR 50.150, "Aircraft impact assessment," shall maintain a copy of the aircraft impact assessment performed to comply with the requirements of 10 CFR 50.150(a) for the term of the certification (including any period of renewal).

b. An applicant or licensee who references this appendix to include both the GE DCD and the STPNOC DCD shall maintain a copy of the aircraft impact assessment performed to comply with the requirements of 10 CFR 50.150(a) throughout the pendency of the application and for the term of the license (including any period of renewal).

Dated at Rockville, Maryland, this day of 2010.

For the Nuclear Regulatory Commission.

Annette L. Vietti-Cook,
Secretary of the Commission.

DRAFT ENVIRONMENTAL ASSESSMENT BY THE
U.S. NUCLEAR REGULATORY COMMISSION
RELATING TO THE CERTIFICATION OF THE
STP NUCLEAR OPERATING COMPANY
AMENDMENT TO THE U.S. ABWR STANDARD PLANT DESIGN
DOCKET NO. 52-001

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UNITED STATES NUCLEAR REGULATORY COMMISSION
DRAFT ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT
RELATING TO THE CERTIFICATION OF THE
STP NUCLEAR OPERATING COMPANY
AMENDMENT TO THE U.S. ABWR STANDARD PLANT DESIGN
DOCKET NO. 52-001

The U.S. Nuclear Regulatory Commission (NRC) is proposing an amendment to the design certification for the U.S. Advanced Boiling Water Reactor (ABWR) design in response to an application submitted to address the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.150, "Aircraft Impact Assessment," on June 30, 2009, by STP Nuclear Operating Company (STPNOC). A design certification is a rulemaking; the NRC has decided to adopt design certification rules as appendices to 10 CFR Part 52.

The NRC has performed the following environmental assessment (EA) of the environmental impacts of the proposed new rule and has documented a finding of no significant impact in accordance with the requirements of 10 CFR 51.21 and the National Environmental Policy Act of 1969, as amended. This EA also addresses the severe accident mitigation design alternatives (SAMDA) that the NRC has considered for the STPNOC amendment to the U.S. ABWR design. This EA does not address the site-specific environmental impacts of constructing and operating any facility that references the U.S. ABWR design certification amendment at a particular site. Those impacts would be evaluated as part of any application or applications for the siting, construction, or operation of such a facility.

As discussed in Section 3.0 of this EA, the NRC has determined that issuing the subject design certification amendment does not constitute a major Federal action significantly affecting the quality of the human environment. This determination is based on the generic finding made in 10 CFR 51.32(b)(2) that there is no significant environmental impact associated with an amendment to a design certification. The action would not authorize the siting, construction, or operation of a facility using the U.S. ABWR design. Rather, it would merely codify the amendment to the U.S. ABWR design in a rule that could be referenced in a future combined license (COL) application. Furthermore, because certification of the amendment constitutes only a rule rather than a physical action, it would not involve the commitment of any resources that have alternative uses. As explained in the statements of consideration for “Licenses, Certifications, and Approvals for Nuclear Power Plants; Final Rule” (72 FR 49352; August 28, 2007, at 49427), the 10 CFR 51.32(b)(2) generic finding of no significant impact is legally equivalent to a categorical exclusion. Therefore, the NRC has not prepared an environmental impact statement (EIS) for the action.

In accordance with 10 CFR 51.30(d), an EA for an amendment to a design certification is limited to consideration of whether the design change, which is the subject of the proposed amendment, renders a SAMDA previously rejected in the earlier environmental assessment to become cost beneficial, or results in the identification of new SAMDAs, in which case the costs and benefits of new SAMDAs and the bases for not incorporating new SAMDAs in the design certification must be addressed. As discussed in Section 4.0 of this EA, the amendment would not cause a SAMDA previously rejected in the environmental review for the U.S. ABWR design to become cost beneficial or lead to the identification of any new SAMDAs.

In addition, this draft EA is being issued in connection with a proposed rule that is being published in the *Federal Register* on [PROPOSED RULE PUBLICATION DATE] ([PROPOSED

RULE *Federal Register* CITATION]. As provided in 10 CFR 51.31(b)(1)(ii), comments on this EA will be limited to the consideration of SAMDAs as required by 10 CFR 51.30(d).

ENVIRONMENTAL ASSESSMENT

1.0 Identification of the Proposed Action

The proposed action is to issue a rule amending the certified U.S. ABWR design in Appendix A to 10 CFR Part 52. The revised rule would allow applicants to reference both the General Electric (GE) Design Certification Document (DCD) and the STPNOC DCD or to reference only the GE DCD and address the requirements of 10 CFR 50.150 as part of a COL application under 10 CFR Part 52.

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 achieves these benefits by certifying nuclear plant designs. Subpart B to 10 CFR Part 52 allows for certification of nuclear plant designs in the form of rulemaking.

The proposed action is to issue a rule amending 10 CFR Part 52 to revise the certified U.S. ABWR design to meet the requirements of 10 CFR 50.150. The amendment would allow COL applicants to reference both the GE DCD and the STPNOC DCD rather than having to individually address the requirements of 10 CFR 50.150 as part of each COL application referencing the GE DCD. Those portions of the U.S. ABWR design included in the scope of the certification amendment rulemaking would not be subject to further safety review or approval in a COL proceeding. In addition, the design certification rule could eliminate the need to consider SAMDAs individually for any future facilities that reference the certified U.S. ABWR design.

3.0 The Environmental Impact of the Proposed Action

The proposed action constitutes issuance of an amendment to the U.S. ABWR design certification. According to 10 CFR 51.32(b)(2), the NRC has generically determined that there is no significant environmental impact associated with the issuance of an amendment to a design certification. The amendment would merely codify the NRC's approval of the amendment to the U.S. ABWR design through its final safety evaluation report (FSER) on the design and any FSER supplement issued during rulemaking (refer to Agencywide Documents Access and Management System (ADAMS) Accession No. MLXXXXXXXXXX). Furthermore, because certification of the amendment constitutes a rule rather than a physical action, it would not involve the commitment of any resources that have alternative uses.

The amendment to the design certification rule by itself would not authorize the siting, construction, or operation of a nuclear power plant. An applicant for a COL that references the U.S. ABWR design will be required to address the environmental impacts of construction and operation at a specific site. The NRC would then evaluate the environmental impacts and issue an EIS in accordance with 10 CFR Part 51. However, the SAMDA analysis that has been completed as part of this EA can be incorporated by reference into an EIS related to an application for siting, construction, or operation of a nuclear plant that references the U.S. ABWR design.

4.0 Severe Accident Mitigation Design Alternatives

4.1 STPNOC's Assessment of 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 original design certification for the U.S. ABWR design. In the 1985 policy statement on severe accidents, 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 GE DCD.

The U.S. ABWR SAMDA analysis in the Technical Support Document (December 21, 1994), concluded that there were no cost beneficial SAMDAs for the U.S. ABWR. In the "Applicant's Supplemental Environmental Report-Amendment to ABWR Standard Design Certification," ABWR-LIC-09-062, STPNOC assessed the impacts of the proposed design changes on the probabilistic risk assessment (PRA) and the SAMDA analysis for the certified U.S. ABWR design. As described in Table 1 of the supplemental environmental report, the amendment includes the following design changes:

1. Addition of alternate feedwater injection system.

This design change adds a system that provides a new and diverse water supply for core cooling that is separate and independent from the existing sources of core cooling in the U.S. ABWR design.

2. Addition of instrumentation for new alternate feedwater injection system.

This design change adds instrumentation that can provide additional information for operators in events such as station blackout.

3. Addition of new fire doors and upgrading existing fire doors.

This design change adds and strengthens fire barriers inside the reactor building.

STPNOC concluded "that none of the design changes has a negative impact on U.S. ABWR plant risk as evaluated in the U.S. ABWR PRA." STPNOC further concluded that the design changes will provide "a net benefit in terms of risk reduction over the existing U.S. ABWR design." However, the quantitative effect of these design changes on the PRA is small.

Therefore, STPNOC concluded the design changes will not “result in a change to the U.S. ABWR PRA or the DCD Chapter 19,” and the U.S. ABWR SAMDA assessment in the 1994 Technical Support Document will not change and remains valid.

As a result, STPNOC concluded that the SAMDAs that were considered and rejected as not being cost beneficial in the SAMDA assessment in the 1994 Technical Support Document “did not become cost beneficial due to the proposed design changes.” STPNOC also concluded that the “evaluation did not identify new SAMDAs that may be reasonably incorporated into the U.S. ABWR design.”

4.2 NRC Evaluation

NRC staff reviewed the information in the supplemental environmental report and the referenced certified GE DCD, NUREG–1503, Supplement 1, and the EA issued for the original U.S. ABWR design certification rule.

NRC staff reviewed the applicant’s evaluations of the design changes and concluded that the proposed design changes would result in a small reduction in the core damage frequency, as compared with the existing U.S. ABWR design. In particular, the alternate feedwater injection system adds additional defense-in-depth to provide additional assurance of core cooling during an accident. Therefore, the staff concluded that the proposed design changes would not alter the original SAMDA evaluation and would not change the conclusions reached in the EA issued for the original U.S. ABWR design certification rule. Furthermore, the staff examined the list of potential design changes considered by GE in the Technical Support Document and concluded that the new design changes do not render any previously rejected SAMDA as cost beneficial. The staff could not identify any new SAMDAs worthy of further evaluation in accordance with 10 CFR 51.30(d). Finally, the existing site parameters specified in the 1994 Technical Support Document are not affected by the proposed design changes.

5.0 Public Comments and NRC Responses

(RESERVED FOR FUTURE USE)

6.0 Finding of No Significant Impact

On the basis of the EA, the NRC concludes that the proposed action would not have a significant effect on the quality of the human environment. Accordingly, the NRC has decided not to prepare an EIS for the proposed action.

For further details with respect to the proposed action, see the proposed design certification amendment and the documents referenced in the statements of consideration for the proposed amendment. 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, Room O-1F21, Rockville, Maryland. Publicly available records will be accessible electronically from the 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.Resource@nrc.gov.