May 19, 2014

Mr. Jeffrey A. Benjamin
Senior Vice President
Westinghouse Electric Company
Nuclear Power Plants
1000 Westinghouse Drive
Cranberry Township, PA 16066

SUBJECT: AP600 REACTOR DESIGN CERTIFICATION—NONACCEPTANCE OF EXEMPTION REQUEST REGARDING THE PERIOD FOR SUBMITTING AN APPLICATION FOR RENEWAL AND DURATION

Dear Mr. Benjamin:

By letter dated January 16, 2014, the Westinghouse Electric Company (Westinghouse) submitted three exemption requests for the AP600 Standard Design Certification (DC). The proposed three exemptions would (1) extend the date for which the AP600 DC is valid, and able to be referenced, from 15 to 20 years to expire on January 24, 2020; (2) extend the AP600 renewal application dates by 5 years, between January 24, 2017, and January 24, 2019; and (3) keep the AP600 DC valid, and able to be referenced, through expiration and until the U.S. Nuclear Regulatory Commission (NRC) makes a decision on a renewal application. The purpose of this letter is to provide the results of the NRC staff's review of these exemption requests.

The regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.12, "Specific exemptions," state the Commission will only consider granting an exemption in cases with special circumstances. Westinghouse asserts it has demonstrated special circumstances on three grounds, citing the criteria of 10 CFR 50.12(a)(2)(ii), (iii), and (v). The NRC staff has evaluated these bases for special circumstances and found them insufficient for granting the requested exemptions. The staff has also evaluated Westinghouse's proposed basis for maintaining the effectiveness of the AP600 DC past its expiration and also found it insufficient. Therefore, the staff is denying the three exemption requests and declines to take action to maintain the effectiveness of the AP600 DC past its expiration. The staff's evaluation supporting the denial of each of Westinghouse's requests is enclosed.

Should Westinghouse choose to pursue a new AP600 DC, the staff would consider the previously certified AP600 design, and the staff review would focus on: (1) Westinghouse's proposed changes to the AP600 design and (2) significant new information (developed since the AP600 was originally certified) that warrants reconsideration of the NRC's safety findings supporting the original AP600 certification. Where the design and applicable NRC regulations have not changed and where the staff has not identified new information, the staff would verify that previous reviews remain applicable. Similarly, if Westinghouse incorporates features from the AP1000 certified design or combined license amendments and demonstrates their

applicability to the AP600 design, the staff would draw on previously-completed staff reviews to the extent practical. The staff would encourage Westinghouse to clearly delineate these aspects in its application. This would enable the NRC to focus its review of an AP600 application on the aspects of the design with the greatest regulatory significance and enable further efficiency in its review.

If you have any questions, please contact Mr. Dennis Galvin of my staff at 301-415-6256.

Sincerely,

/RA/

Glenn M. Tracy, Director
Office of New Reactors

Docket No.: 52-003
Project No.: 0809

Enclosure:
Staff Evaluation of Westinghouse
Request for Scheduler Exemption

cc: Westinghouse ListServ

applicability to the AP600 design, the staff would draw on previously-completed staff reviews to the extent practical. The staff would encourage Westinghouse to clearly delineate these aspects in its application. This would enable the NRC to focus its review of an AP600 application on the aspects of the design with the greatest regulatory significance and enable further efficiency in its review.

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Staff Evaluation of Westinghouse Request for Schedular Exemption Regarding the Period for Submitting an Application for Design Certification Renewal and Duration of the AP600 Reactor Certified Design (Docket No. 52-003, Project 0809)

By letter dated January 16, 2014, the Westinghouse Electric Company (Westinghouse) submitted three exemption requests for the AP600 Standard Design Certification (DC) (Agencywide Documents Access and Management System [ADAMS] Accession No. ML14021A014). The proposed three exemptions would (1) extend the date for which the AP600 DC is valid, and able to be referenced, from 15 to 20 years to expire on January 24, 2020; (2) extend the AP600 renewal application dates by 5 years, between January 24, 2017, and January 24, 2019; and (3) keep the AP600 DC valid, and able to be referenced, through expiration and until the U.S. Nuclear Regulatory Commission (NRC) makes a decision on a renewal application. The purpose of this letter is to provide the results of the NRC staff's review of these exemption requests.

The regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.12, "Specific exemptions," state the Commission will only consider granting an exemption in cases with special circumstances. Westinghouse asserts it has demonstrated special circumstances on three grounds, citing the criteria of 10 CFR 50.12(a)(2)(ii), (iii), and (v). The NRC staff has evaluated these bases for special circumstances and found them insufficient for granting the requested exemptions. The staff has also evaluated Westinghouse's proposed basis for maintaining the effectiveness of the AP600 DC past its expiration and also found it insufficient. Therefore, the staff is denying the three exemption requests and declines to take action to maintain the effectiveness of the AP600 DC past its expiration.

1. 10 CFR 50.12(a)(2)(ii)

The first special circumstance Westinghouse cites is 10 CFR 50.12(a)(2)(ii), which states, "Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule."

Westinghouse Basis

Westinghouse states that 10 CFR 50.12(a)(2)(ii) is met because strict application of 10 CFR 52.55, "Duration of certification"; 10 CFR 52.57, "Application for renewal"; and Section VII, "Duration of this Appendix," of Appendix C, "Design Certification Rule for the AP600 Design," to 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," in these particular circumstances would not serve the underlying purpose of those regulations. Westinghouse points out that in the proposed rule for 10 CFR Part 52, a 10-year DC period was proposed, but no basis for the duration was provided. In the final rule for 10 CFR Part 52, the Commission explained that it was extending the period of certification to 15 years "to permit more operating experience with a given design to accumulate before the certification comes up for renewal or ceases to be available to applicants for combined licenses."

Westinghouse states that although the AP600 reactor design has not been built, and thus has no accumulated operating experience, the design is substantially similar to the AP1000 reactor design that is currently under construction at multiple sites in the United States and China. Westinghouse indicates that applicable experience is not expected until sometime in 2017 or 2018 for plants under construction in the United States. Therefore, allowing Westinghouse to submit an application for renewal between January 24, 2017, and January 24, 2019, is a

reasonable measure that permits Westinghouse to accumulate experience that is applicable to the AP600 reactor DC, assess the accumulated changes needed to update the design, and develop and submit an acceptable application for renewal.

Staff Response

Westinghouse states that the purposes of 10 CFR 52.55, 52.57, and Section VII of Appendix C to Part 52 were given in the final rule for 10 CFR Part 52, in which the Commission explained that it was extending the period of certification to 15 years "to permit more operating experience with a given design to accumulate before the certification comes up for renewal or ceases to be available to applicants for combined licenses." However, Westinghouse will have no *operating* experience with the AP600 design to support its renewal in 2019 as no AP600s have been built or are under construction. Westinghouse implicitly argues that the special circumstance criterion is fulfilled by Westinghouse's intent to rely on operating experience gained from a different design, the AP1000. The staff does not find this argument persuasive. Under the best of circumstances, only a limited amount of operating experience would be available from the AP1000 reactors currently under construction to support changes to the AP600 design by 2019, Westinghouse's proposed date for the delayed submission of an AP600 renewal application.

Furthermore, Westinghouse does not explain how incorporating operating experience from another reactor design serves the underlying purpose of the AP600 DC rule. Other than stating that the designs are substantially similar, Westinghouse does not describe what AP1000 operating experience would be applicable to the AP600 design, and what type of design changes to the AP600 would plausibly result from the limited amount of AP1000 operating experience that would be available to support a 2019 delayed renewal application.

Finally, Westinghouse does not explain why it could not have renewed the AP600 design under current regulations and (depending upon the status of the renewal application) either submitted an amended application or an application for amendment of the renewed design reflecting lessons learned from operation of the AP1000 reactors currently under construction. Therefore, the staff finds that Westinghouse has not demonstrated that accumulating AP1000 operating experience represents a special circumstance with regard to the AP600.

Westinghouse has also not addressed how granting an exemption to 10 CFR 52.55, 52.57, and Section VII of Appendix C to Part 52 meets the underlying purpose of 10 CFR 52.59, "Criteria for Renewal." Section 52.59 states the criteria for DC renewal and provides the standards that the NRC must meet to impose new requirements on a certified design. The staff reviews renewal applications to determine if any other NRC requirements should be imposed on the certified design based on application of the renewal criteria in 10 CFR 52.59(b). The staff is unable to determine at this time what additional requirements may need to be imposed on a renewal application for the AP600. For previous DC renewal applications, the staff has identified multiple design changes that the NRC considers to be regulatory improvements or changes that could meet the 10 CFR 52.59(b) criteria. The staff therefore notes that, independent of whether significant new information relevant to the AP600 is provided as a result of operating experience, it is likely that additional analyses or modifications would need to be incorporated in the AP600 design even if Westinghouse filed a timely renewal application.

If the staff were to grant the exemptions, it would in effect be granting a 5-year DC renewal without reviewing a DC renewal application and without analyzing the requirements in 10 CFR 52.59 to see if any changes to the design are warranted now. Therefore, the staff finds that Westinghouse has not shown that special circumstances exist to grant the exemptions

because it has not demonstrated that granting the exemption would meet the underlying purposes of 10 CFR 52.55, 52.57, 52.59, and Section VII of Appendix C to Part 52.

2. 10 CFR 50.12(a)(2)(iii)

Another special circumstance that Westinghouse states it meets is 10 CFR 50.12(a)(2)(iii), which states, "Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated."

Westinghouse Basis

Westinghouse states that 10 CFR 50.12(a)(2)(iii) is satisfied because both Westinghouse and the NRC would incur undue hardships and unnecessary additional costs if the current AP600 reactor DC were allowed to expire on January 24, 2015, and if Westinghouse were required to submit and the NRC needed to review a new DC application. Westinghouse states that a new application for certification of the AP600 reactor design would require all previously resolved issues to be reopened and reexamined in a new application and, therefore, needlessly be subject to further review by the NRC without any appreciable safety benefit. Westinghouse also indicates that submitting a timely renewal application would not allow Westinghouse to incorporate lessons learned from the AP1000 construction.

Staff Response

Westinghouse has not demonstrated that submittal of a new application in this circumstance represents an undue hardship compared to submittal of a renewal application. Westinghouse's claim that a new application for certification of the AP600 reactor design must necessarily require all previously resolved issues (i.e., the entire safety basis for the previously-approved AP600 design) to be reopened and reexamined by the NRC in a new application is unpersuasive. The NRC has, in analogous situations, restricted the scope of its safety review to eliminate repetitive and unnecessary safety reviews. For example, in conducting the safety review of the AP1000 (final certification: 71 FR 4464; January 27, 2006), the staff constrained its review to those issues that changed from the AP600 design to the AP1000 design. The staff took similar action in the safety review of the AP1000 amendment (76 FR 82079; December 30, 2011) and the Advanced Boiling Water Reactor (ABWR) amendment to add the "STP Nuclear Operating Company (STPNOC)" option (76 FR 78096; December 16, 2011) addressing compliance with 10 CFR 50.150, the Aircraft Impact Assessment Rule. The staff would apply the same regulatory approach in constraining the scope of the NRC staff's safety review of the AP600, regardless of whether the application was for a "new" DC or for a "renewal." The staff review of a new DC application related to a previous certified design can focus on areas in which either the design or regulations have changed or where the staff has identified new information. To support a focused review by the staff, the applicant could describe in detail the differences between the original DC and a new DC application. Where the design or regulations have not changed or where the staff has not identified new information, the staff could verify that previous reviews remain applicable. This would allow the applicant and staff resources to be focused on areas with safety and regulatory significance. This approach could be applied to the review of a new AP600 DC application and, therefore, still obtain the advantages that Westinghouse claims are special circumstances for granting the exemptions. For these reasons, the staff does not find any "undue hardship" on Westinghouse (or on the NRC) by processing the AP600 certification as a new DC instead of a renewal.

Even if the NRC were to treat the AP600 as a renewal, Westinghouse appears to overestimate the effect of issue finality accorded in a renewal review. Based upon the staff's experience in both the original AP1000 certification review and the AP1000 amendment review, where there was a "baseline" of NRC-approved information, there were many areas where the applicant and the staff had differing initial views on the scope and effect of proposed design changes on the remaining set of "baseline" information. These differences in views had to be resolved, in part through requests for additional information (RAIs) and meetings. These differences in views and the resolution process are not different in scope for a renewal review as compared with a review of the AP600 as a new DC. Furthermore, under 10 CFR 52.59(b), the NRC may impose changes to the design if one or more of the finality criteria for renewal in that section are met. The staff may seek information from a DC applicant to help the NRC make a determination as to whether an NRC-initiated change to the renewed design may be justified under 10 CFR 52.59(b). This is consistent with draft NRC views on application content and draft staff review guidelines the staff provided to ABWR DC renewal applicants (ADAMS Accession No. ML103140050). Such RAIs would be, in substance, no different than what the staff would seek in a new DC review. Thus, as a practical matter, there would be little difference in burden imposed on Westinghouse (and incurred by the NRC) between processing the AP600 as a new DC instead of as a renewal.

Westinghouse's hardship request assumes that the NRC will be able to treat the AP600 application as a renewal of the existing DC. This is not necessarily the case, because that assumption depends significantly on the nature of the proposed changes. Under § 52.59(c), the NRC may require an application for renewal of a DC to be refiled as an application for a new design if the amendment (to a DC renewal) request entails such an extensive change to the DC that an essentially new standard design is being proposed. Westinghouse did not describe (or constrain) the nature of the changes to the AP600 in sufficient detail for the NRC to determine whether it is reasonable for the NRC to now conclude that the AP600 renewal application, when submitted by Westinghouse, may be processed as a renewal instead of as a new design pursuant to § 52.59(c). Indeed, any substantive design change proposed by Westinghouse has the potential to affect many portions of the design and potentially require re-review of them. In light of the limited information provided by Westinghouse on the likely scope of design changes to be included in the renewal, and the associated potential that the revised AP600 design could not be treated as a renewal under § 52.59(c), the staff is unable to make the undue hardship finding under § 50.12(a)(2)(iii).

Moreover (and analogous to the staff's discussion on 10 CFR 50.12(a)(2)(ii)), Westinghouse does not explain why it could not have renewed the AP600 design under current regulations and (depending upon the status of the renewal application) either submitted an amended application or an application for amendment of the renewed design reflecting construction lessons learned from the four AP1000 reactors currently under construction in the United States.

Westinghouse's circumstance is no different than any other DC applicant who is uncertain whether there will be customers for its certified design, or who may wish to make changes to the design during the DC renewal based on "lessons learned" obtained from the construction or operation of its certified design. Thus, Westinghouse has identified no "hardship" or costs which would not otherwise be faced by similarly-situated DC applicants.

3. 10 CFR 50.12(a)(2)(v)

Westinghouse also cites 10 CFR 50.12(a)(2)(v), which states, “the exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation.”

Westinghouse Basis

Westinghouse states that extending the period for submitting an application for renewal of the DC of the AP600 reactor design to January 24, 2019, would only result in temporary relief from the NRC's regulations. Westinghouse further states that it has made a good-faith effort to comply with the NRC’s regulations. It was not originally Westinghouse’s intent to seek renewal of the AP600 reactor design. Westinghouse states that once its business plans changed, it proactively engaged with the NRC as soon as it was feasible to do so. As the DC renewal application deadline approached, Westinghouse states that it submitted a timely request for exemption.

Staff Response

The staff does not find Westinghouse’s argument persuasive. This special circumstance is generally intended to provide temporary relief from a regulation that has continuing effect on a licensee and was not intended to address a “one-time” regulatory obligation such as the timing of a request for renewal. If the NRC were to grant an exemption from Section 52.57(a) with respect to the time for filing of a DC renewal application, the NRC would be granting Westinghouse “permanent” relief from that regulation and effectively rendering the timing requirement in that section irrelevant.

Westinghouse asserts that it submitted its request for an exemption in a timely fashion after a change in customer interest in the AP600, which it cites as support for finding special circumstances under Section 50.12(a)(2)(v). However, the staff does not find this argument persuasive, because every DC renewal applicant faces a changing business climate. Westinghouse did not provide any information that would lead the NRC to conclude that Westinghouse’s situation is unique and unlikely to be faced by any other DC applicant, which is also a key consideration under this exemption criterion. Nor did Westinghouse represent that the “customer interest” was more than a generic commercial inquiry, which may or may not result in an actual contract for Westinghouse to supply a revised AP600 DC to an actual customer (although this is not to say that to obtain such an exemption an actual customer would need to be named). The uncertain timing of business interest from potential, unspecified, customers, is insufficient justification for the staff to grant permanent relief from these timing requirements. Moreover, as discussed above, Westinghouse did not explain why filing a new DC application would be inconsistent with its ability to meet its business requirements with respect to “potential customer interest.” Therefore, the staff finds that Westinghouse provided insufficient justification to support a determination of special circumstances under Section 50.12(a)(2)(v).

4. Westinghouse Request for Continued Effectiveness of the Certified AP600 Reactor Design

Westinghouse requests keeping the AP600 DC valid, and able to be referenced, through expiration and until the NRC makes a decision on a renewal application.

Staff Response

Westinghouse has not identified any combined license (COL) applicants impacted by the expiration of the AP600 DC. Westinghouse implies that customer interest for an AP600 design that incorporates AP1000 construction lessons learned—lessons which will not be finalized for several years—is a basis for keeping the AP600 DC valid and able to be referenced. However, Westinghouse describes customer interest in the AP600 design in only the most general terms. As discussed above, Westinghouse has not identified any potential domestic customer, and any such customer (i.e., a potential COL applicant) could reference the new DC application while it is under review and receive a COL when that DC rulemaking is complete. Therefore, Westinghouse has not provided sufficient evidence to support its request that the AP600 DC remain valid and able to be referenced.

Overall Staff Conclusion

The staff finds that the special circumstances in 10 CFR 50.12 have not been met and Westinghouse has not identified a near-term licensing need for keeping the AP600 DC able to be referenced. Therefore, the staff denies the three exemption requests regarding the AP600 DC. Westinghouse may submit a new AP600 DC application in a manner consistent with the provisions of 10 CFR 52.59(d). Westinghouse has not provided sufficient evidence to support its request that the AP600 DC remain valid, and able to be referenced, past the current date of its expiration. Thus, the staff declines to take action to maintain the effectiveness of the AP600 DC past its expiration.