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OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

September 12, 2003

The Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attn: Rulemaking and Adjudications Staff

Re: Comments on Proposed Rule on Early Site Permits, Standard Design Certifications, and Combined Licenses for Nuclear Power Plants: 10 CFR Part 52

Dear Secretary:

On July 3, 2003, the NRC issued a Proposed Rule on "Early Site Permits, Standard Design Certifications, and Combined Licenses for Nuclear Power Plants." The NRC is proposing to amend its regulations to reflect NRC experiences with previous design certification reviews and discussions with industry stakeholders about the early site permit (ESP), design certification, and combined operating license (COL) processes. According to the Proposed Rule, the changes to Part 52 and associated regulations are expected to improve the effectiveness of the licensing process for future applicants. In the Proposed Rule, the NRC asked for public comments on the proposed revisions and also on several related issues including the design certification amendment process and Part 21 applicability. In response, we are submitting the following comments on behalf of our client, Atomic Energy of Canada Limited (AECL).

We appreciate the opportunity to submit comments on this important rulemaking for the industry. We also commend the Commission and the NRC Staff for making prior drafts of the Proposed Rule available for public comment and taking those comments into account in the Proposed Rule. We believe that this process has resulted in numerous improvements in the Proposed Rule.

We also fully support the Commission's efforts to improve the effectiveness of the 10 CFR Part 52 licensing process for future applicants. However, we are concerned that certain provisions of the Proposed Rule impose new and unnecessary regulatory burdens. Further, the Proposed Rule does not adequately address several important changes previously recommended by the industry.

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C O U N S E L O R S A T L A W

As a result, the Proposed Rule does not sufficiently improve the effectiveness of the licensing process and, in fact, may make it more burdensome than the current version of Part 52. Consequently, the Proposed Rule should be revised further to incorporate these constructive changes and eliminate unnecessary regulatory burdens.

In particular, we believe that the proposed revision to Part 52, on the whole, increases regulatory burdens. Section X, Regulatory Analysis, of the Statement of Consideration states that the Proposed Rule contains only two amendments that appear to impose new regulatory burdens on future applicants for construction permits and combined licenses. We believe that there are several other changes in the Proposed Rule that impose new regulator burdens that are unnecessary for safety and that have not been adequately evaluated or justified by the NRC. For example, the Proposed Rule would 1) make Part 21 applicable to design certification applicants who do not supply the reactor to the COL applicant; 2) make all of the provisions of Part 50 (including financial and technical qualification requirements) applicable to design certification applicants; and 3) enable the NRC to impose certain changes on COL licensees that reference a design certification. None of the new burdens is justified or appropriate.

We also believe that the Final Rule should include a design certification amendment process to allow the vendor to request beneficial changes through rulemaking. Currently, Part 52 allows plant-specific changes in a certified design to be made by the COL applicant in individual licensing proceedings (through a 50.59-like process and by requesting NRC approval of the more significant changes). However, this process introduces unwanted uncertainty and economic risks for the COL applicant, and potential customers for a certified design are demanding more certainty before contracting for a new nuclear power plant. In particular, potential customers of a certified design do not want to be burdened with the costs and risks of making plant-specific changes. While Part 52 allows the design certification applicant to apply for a new design certification that incorporates changes, the cost of a new design certification renders that method commercially infeasible for making the kinds of changes envisioned under this proposal. Therefore, we strongly recommend that the Commission establish a process for a vendor to request an amendment to the design certification.

Finally, there are additional changes that should be made to Part 52 to further reduce regulatory burdens. Several of these changes were recommended in prior industry comments, but not incorporated into the Proposed Rule. We continue to believe that such changes would be safe, reduce regulatory burdens, and increase efficiency.

Attachment A to this letter provides our detailed comments on the Proposed Rule. Attachment B provides our comments to NRC's "Specific Request for Comments" included in Section IV of the Proposed Rule. The attached comments focus on design certification issues. However, we

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also support the comments of the Nuclear Energy Institute (NEI) with respect to other aspects of the Proposed Rule.

Sincerely,



Steven P. Frantz
Paul M. Bessette

Enclosures

cc: Victor Snell (AECL)
Vince Langman (AECL)
Cal Reid (Bechtel)
Russ Bell (NEI)

ATTACHMENT A

Comments on Proposed Rule for 10 CFR Part 52

We strongly support the Commission's effort to move forward on improving the effectiveness of the licensing process for future applicants for new reactors, but we encourage the Commission to give high priority to issuing a rule that is both safety-focused and efficient. The following are our principal comments on the Proposed Rule:

- The Proposed Rule contains a number of burdensome new requirements and restrictions that are not required for safety and are not included in the current version of Part 52.
- The Final Rule should also include a process which allows the vendor to apply to amend a Design Certification to incorporate beneficial changes.
- The Final Rule should include additional changes to further reduce unnecessary regulatory burdens.

Each of these concerns is discussed in more detail below.

I. The Proposed Rule Contains Unnecessary and Burdensome New Requirements and/or Changes

Section X, Regulatory Analysis, of the Statement of Consideration states that the Proposed Rule contains only two amendments that appear to impose new regulatory burdens on future applicants for construction permits and combined licenses. These two amendments include (1) requiring applicants who reference an ESP to update and correct emergency planning information and (2) requiring applicants who reference a certified design to include a plant-specific probabilistic risk assessment (PRA). We believe that there are several other changes in the Proposed Rule that impose new regulator burdens that are unnecessary for safety and that have not been adequately evaluated or justified by the NRC. As a result, we believe that the proposed revision to Part 52, on the whole, increases regulatory burdens. The increased regulatory burdens include:

- Applicability of Part 21 – The Proposed Rule would amend 10 CFR Part 21 to clarify the applicability of Part 21 to individuals, corporations, *etc.*, that hold a permit or license under 10 CFR Part 52. As noted in the Discussion of Substantive Changes on the proposed revisions to Part 21 (68 Fed. Reg. 40,037), the Commission does not believe that a design certification rule would reasonably result in a “substantial safety hazard” so long as the design certification rule is not actually referenced in a license application. Accordingly, the Commission does not intend to apply the provisions of Part 21 to the applicant/vendor for a design certification during the pendency of its design certification application. The Commission also does not intend to apply the provisions of Part 21 to the design certification applicant/vendor after the Commission issues a final design certification rule, but before the

design certification rule is referenced by at least one applicant/licensee. We agree with the Commission that design certification applicants should not be subject to Part 21 under these circumstances.

In discussing the proposed revisions to Part 21, the Commission also noted that it is considering a change to the definition of “supplying or supplies” in § 21.3 to ensure an applicant/vendor who does not, pursuant to contract, supply to a license applicant the complete design for the design certification, is also subject to Part 21. We believe that such a change is unwarranted and inappropriate. If the design certification applicant/vendor does not supply the final design, it should not have any reporting responsibilities under Part 21. Additionally, Section 206 of the Energy Reorganization Act provides no authorization for such liability. Furthermore, as a practical measure, if the design certification applicant does not supply the final design and has no contractual relationship with the COL applicant, it will not have access to the calculations of the vendor that support the final design and will not be in a position to determine the actual safety significance of any particular defect or noncompliance. Therefore, from both a legal and practical perspective, a design certification applicant should not have any Part 21 responsibility if it is not the vendor for a COL applicant.

- Applicability of Part 50 – The Proposed Rule would add a new § 52.5, listing all of the licensing provisions in Part 50 that also apply to the licensing processes in Part 52. As noted in the Discussion of Substantive Changes (68 Fed. Reg. 40,028), this change is intended to make clear that an applicant for a certification under Part 52 must comply with all listed provisions that are otherwise applicable to Part 50 licensees. The proposed revision to § 52.5, however, is overly broad and would impose burdensome and seemingly inappropriate new requirements on applicants for design certifications. For example, proposed § 52.5 would subject applicants for design certifications to whistleblower protection provisions under § 50.7, reporting requirements of §§ 50.72 and 50.73, and the § 50.59 plant change process. These burdensome new requirements are not warranted for entities that are neither constructing nor operating a reactor and the new requirements have not been adequately justified or evaluated by the Commission.

Due to the significant potential for imposing unwarranted Part 50 requirements on all Part 52 applicants, the Commission should implement the industry’s proposal to tailor the applicable provisions of Part 50 to Part 52 by adding new individual provisions to appropriate sections of Part 52. While this revision process may initially be more burdensome on the Commission, it is necessary to avoid broadly applying sometimes inappropriate regulatory requirements to all of Part 52.

Similarly, a new § 52.111 would impose *all* of the requirements of 10 CFR Chapter I on applicants for a design certification. This new section is far more expansive and burdensome than existing § 52.48 and, if interpreted literally, it would convert a design certification application into the equivalent of an operating license application. Further, there are numerous requirements in Chapter 1 that are not and should not be applicable to design certification applicants including antitrust requirements, technical qualifications, and

financial qualifications. NRC should delete § 52.111, since it is unnecessary and would impose numerous inapplicable requirements to design certification applicants. In the alternative, NRC should revise and limit § 52.111 to ensure that only those technically relevant sections of Chapter I would apply to applicants for a design certification.

- **Backfit Provisions** -- The Proposed Rule would add a new § 52.127, providing the Commission with the ability to make changes to the design certification rules or the generic design control documents (DCD) that “reduce unnecessary regulatory burdens.” Under § 52.127(a)(3), such changes would be imposed upon all plants that reference the design certification. We agree, in general, with this proposed revision, but believe that changes that reduce regulatory burden should only be imposed upon future COL applicants and not existing COL applicants who reference the design certification. An existing licensee may incur substantial costs in implementing the changes that are not borne by a COL applicant. Therefore, an existing licensee referencing a certified design should be allowed, but not required, to implement backfits to reduce regulatory burdens.

II. 10 CFR Part 52 Should Include a Design Certification Amendment Process to Incorporate Beneficial Changes

In Section IV of the Statement of Consideration for the Proposed Rule, the Staff asked for public comments on particular issues, including whether the final rule should allow an original design certification applicant to petition the Commission for rulemaking to amend the design certification rule to incorporate beneficial changes, including improvements in safety, and/or design changes that would significantly improve efficiency, reliability, and economics. We fully support incorporation of a design certification amendment process to allow such changes through rulemaking and urge the Commission to include this change in the Final Rule. Specifically, an updated design certification amendment process is needed so that design changes that would significantly improve efficiency, reliability, and economics can be incorporated into certified designs, without impacting safety. We recommend that the Commission adopt the design certification amendment process language proposed by NEI in its March 22, 2002 letter to the NRC on this issue. This proposal recommends the following changes to 10 CFR § 52.63 (changes and additions are underlined):

**PROPOSED REVISION TO EXISTING SECTION 52.63
(PROPOSED SECTION 52.127) – FINALITY OF
STANDARD DESIGN CERTIFICATIONS**

- (a)(1) Notwithstanding any provision in 10 CFR 50.109 and except as provided in paragraph (d) of this section, while a standard design certification is in effect under § 52.55 or 52.61, the Commission may not modify, rescind, or impose new requirements on the certification, whether on its own motion, or in response to a petition from any person, unless the Commission determines in a rulemaking that a modification is necessary, either to bring the certification or the referencing plants into compliance with the Commission’s regulations applicable and in effect at the time the certification was issued, or to assure adequate protection of the public health and safety or the common defense

and security. The rulemaking procedures must provide for notice and comment, and an opportunity for the party which applied for certification to request an informal hearing which uses the procedures described in § 52.51 of this subpart.

* * *

- (d) The holder of a standard design certification issued under this Subpart may file a request for an amendment to the design certification by way of notice and comment rulemaking. The Commission shall grant the amendment request if it determines that the amendment will comply with the Atomic Energy Act and the Commission's regulations in effect at the time of the amendment. If the amendment request entails such an extensive change to the design certification that an essentially new standard design is being proposed, an application for a design certification shall be filed in accordance with § 52.45 and 52.47 of the part. The amendment will apply to construction permits or combined licenses that reference the standard design certification and that are issued after the effective date of the amendment.

Currently, 10 CFR § 52.63(b) and Section VIII of the design certification rules allow a license applicant to seek NRC-approval of plant-specific changes in a design certification. Additionally, § 52.63(a) allows the Commission, on its own initiative or at the request of any person, to engage in rulemaking to modify a design certification. However, such modifications are limited to changes "necessary either to bring the certification or the referencing plants into compliance with the Commission's regulations applicable and in effect at the time the certification was issued, or to assure adequate protection of the public health and safety or the common defense and security." Part 52 currently does not contain any provision that would allow the applicant for a design certification to request the Commission to amend the design certification to provide for beneficial changes.

When Part 52 was first proposed, § 52.63(b) included a provision that would have allowed beneficial design changes to be incorporated into certified designs through rulemaking. However, the Commission deleted that provision from the final rule, stating that the final rule placed the plant designer on the same footing as the Commission or any interested member of the public. Specifically, the Commission was concerned that the proposed design certification amendment process would make it easier for a designer to amend a certification than for the Commission to backfit the design. The Commission was also concerned that the amendment process could impact standardization.

That decision was made prior to any experience with detailed design, construction and operation of a plant with a design that had been certified, and therefore was made without the benefits of lessons learned that are currently available. For example, the industry now has experience with design, construction and operation of the Advanced Boiling Water Reactor (ABWR) which is certified in Appendix A to Part 52. Specifically, first-of-a-kind engineering for the ABWR was completed in the United States in the mid-1980s to early 1990s, but was subsequently modified during the detailed design phase for the Lungmen project in Taiwan. Further, two ABWRs were constructed and are now in operation in Japan. As with any project that undergoes detailed

design development, construction, and operation for the first time, a number of beneficial changes were identified for the ABWR. Such changes run the gamut from improvements in efficiency, reliability, and technology (including power uprates), to cost savings, to vendor specific changes and minor corrections. Based on this experience, the designer (General Electric) identified several beneficial design changes, including improvements to safety, in Tier 1, Tier 2, and the generic Technical Specifications of the certified ABWR. Accordingly, there should be a mechanism for a designer to request the NRC to approve the above types of changes without the need for a new design certification application and without the need to require each license applicant to request NRC approval of the changes on a plant-specific basis. Such a process would be consistent with the Commission's objective of promoting standardization.

A. The Plant-Specific Change and New Design Certification Application Processes Are Not Viable Alternatives to a Design Certification Amendment Process.

The existing plant-specific change process is not a viable alternative to the proposed design certification amendment process. As noted previously, Part 52 currently allows a license applicant to make changes in Tier 2 that do not involve an unreviewed safety question and allows the applicant to request NRC approval of other plant-specific changes in the design control document. However, this process places the burden (and risk) on the license applicant rather than on the design certification applicant. Additionally, under this process, there would not be any certainty regarding the acceptability of the design changes until the COL is issued, which is after the applicant has already made substantial investment in the project. Potential customers of a certified design want such matters resolved before a project decision is made. Further, this process only results in approval of plant-specific changes, not generic changes to the design certification, which may adversely impact standardization.

A new design certification application is also not a viable alternative. As discussed in SECY-01-0188, the NRC estimates that a design certification review will take 42-60 months. Furthermore, even for a design that is similar to an existing certified design (e.g., for the AP1000), SECY-01-0188 estimates that the NRC's review costs will total about \$8 million, and Westinghouse has estimated that the design certification proceeding may last almost three years. Such a review (and associated costs) are not good uses of limited utility and NRC resources. Given the time and cost of NRC's review of a new design certification application, a new application is simply not a reasonable alternative for seeking NRC approval of the types of changes envisioned under this proposal.

B. The Design Certification Amendment Process Has Numerous Advantages for Both the Industry and the NRC

The only viable method for obtaining NRC approval of the types of design changes discussed above is through a design certification amendment process. Such a process would have a number of advantages including:

- **Safety** – The application for an amendment would need to comply with the regulations in effect at the time of the amendment (rather than the time of initial certification). This will help ensure that the proposed amendment meets NRC’s latest requirements and is safe. Further, proposed amendments will likely include improvements in safety and reliability, thereby improving the safety of the certified design.
- **Preservation of Public Input** – Under the proposed amendment process, a design certification amendment would require notice and comment rulemaking. Therefore, the public would have full rights to provide input on the proposed changes to the design certification.
- **Standardization** – Beneficial design changes will be identified during the detailed design, construction, and operation of the first plant that references a design certification. It is reasonable to assume that the design certification applicant would then promptly request an amendment of the design certification in order to make the certified design more attractive to customers. All subsequent applicants would then be required to use the amendment process. This will assure that the benefits of standardization are largely achieved. Further, the amendment process may actually enhance standardization as Part 52 currently allows changes on a plant-specific basis.
- **Focus** – Both the amendment application and NRC’s review would be focused on the changes sought by the applicant and would not be required to consider other matters that are unaffected by the applicant’s proposed changes. Thus, an amendment process will be more focused (and, therefore, less costly and more productive) than the process for a new design certification application.
- **Efficiency** – An amendment to a design certification would apply to all pending and future license applications that reference the design certification, thereby relieving each license applicant of the burden of justifying the change and relieving the NRC of the need to perform multiple reviews of similar plant-specific changes. Thus, a design certification amendment process is more efficient than a series of plant-specific reviews. The amendment process will also enable both the industry and the NRC to conserve scarce resources.
- **Certainty** – An amendment to a design certification would also resolve, for all subsequent license applications, any questions regarding the acceptability of the proposed design changes. Thus, the amendment process would provide greater certainty and stability for license applicants, who otherwise would be faced with the prospects of hearings and the concomitant risks and uncertainties.
- **Timeliness** – The duration of NRC’s review of a design certification amendment request would be substantially less than the duration of its review of a new application. Furthermore, a design certification amendment would enable license applicants and the NRC to avoid the need to consider proposed design changes for each license application. Thus, a design certification amendment process will provide for more timely approval of generic changes and the licensing of plants that reference the design certification.

- **Reduction of Regulatory Burden** – The two methods currently provided by Part 52 for obtaining the same results as the proposed amendment process are substantially more burdensome than the proposed amendment process. Therefore, an amendment process would enable the NRC to reduce unnecessary regulatory burdens.

In summary, for a discrete set of generic changes, the design certification amendment process is preferable to either a new design certification or multiple plant-specific changes. Therefore, we strongly urge the Commission to revise Part 52 to allow the original design certification applicant to request the Commission to amend the design certification rule through rulemaking.

III. The Final Rule Should Include Additional Changes to Further Reduce Unnecessary Regulatory Burdens.

There are additional changes that should be made to Part 52 in the Final Rule to further reduce regulatory burden. Several of these changes were recommended in prior industry comments, but not incorporated into the Proposed Rule. We continue to believe that such changes would be safe, reduce regulatory burdens, and increase efficiency. Further recommended changes include:

A. Generally Applicable Provisions

- **Organization and Numbering** – The Proposed Rule incorporates existing appendices into the body of Part 52, which results in renumbering most existing sections of Part 52. The proposed reorganization will impose a substantial burden on the NRC and all stakeholders to relearn the section numbering scheme for Part 52. Additionally, it will cause confusion in the future since existing regulatory and industry guidance on Part 52 uses the original numbering scheme. NRC should reformat any final rule to retain the existing organization (*i.e.*, appendices) of Part 52. For example, the existing DCDs and statements of consideration for the existing design certification rules reference the original section numbers in Part 52, and changes in the section numbers in Part 52 will lead to confusion to future users of these DCDs and design certification rules.

If NRC desires to move the existing appendices into the body of Part 52, NRC should reformat the Final Rule to retain the existing numbering system and add the appendices to the end of existing Subparts A through C (rather than inserting the appendices between existing Subparts A through C). This approach would enable NRC to accomplish its goal of moving the appendices into the body of Part 52, without creating additional burdens or the potential for confusion.

B. Subpart B – Design Certifications

- **Construction Permits** – The Proposed Rule does not state how an applicant for a construction permit can reference a design certification. Therefore, a provision should be added to Part 52 to specify how an applicant for a construction permit can reference a design certification.

- **Tier 2* Exemptions** – Section VIII.B.6.a of the proposed design certification rules states that a design certification applicant may not depart from Tier 2* information in the generic DCD without NRC approval. This is unnecessarily burdensome. Section VIII.B.6.a of the design certification rules should include a phrase at the end of the section that states “except as provided by Section VI.B.5 of this appendix,” which would avoid the need for an exemption in most cases.
- **Backfit Requirements** – Section VIII.C.3 of the proposed design certification rules would allow the NRC to make changes to operational requirements in the DCD without satisfying the backfit requirements in § 50.109. Section VIII.C.3 of the design certification rules should be revised to include a reference to § 50.109.
- **Operational Exemptions** – Section VIII.C.4 of the proposed design certification rules states that a design certification applicant must request an exemption from the NRC if the applicant wants to depart from the generic technical specifications or other operational requirements. This is unduly burdensome. Section VIII.C.4 should be amended to state that a departure from an operational requirement does not require an exemption unless it requires NRC approval under section VIII.B.5.
- **ITAAC** – Section 52.107(a)(1)(viii) of the Proposed Rule requires a design certification to include ITAAC in order to demonstrate that the plant is built and will operate in accordance with the design certification, “the provisions of the Act, and the applicable Commission’s rules and regulations.” This revision could be subject to misinterpretation as requiring a design certification applicant to propose ITAAC for all NRC regulations, including those that are not applicable to the standard design. Therefore, the original language in § 52.47 should be retained.
- **Final Safety Analysis Report (FSAR)** – Section 52.211(b)(4) of the Proposed Rule requires a COL applicant that references a design certification to submit an FSAR. In contrast, the design certification rules require the COL applicant to submit a plant-specific DCD. If these two sections are interpreted literally, a COL applicant would need to submit both an FSAR and plant-specific DCD, which would largely be redundant and burdensome. NRC should revise § 52.211(b)(4) to be consistent with the design certification rules. Additionally, Section II.E.4 of the design certification rules should be revised to refer to the plant-specific DCD instead of the FSAR.

ATTACHMENT B

Comments on "Additional Potential Requirements" of the Proposed Rule

In Section VI of the Proposed Rule, the NRC stated that it was seeking public comment on additional potential requirements for Parts 50 and 52. Several of those issues are discussed below:

Issue 6: Should Part 52 allow the original design certification applicant to petition the Commission for rulemaking to amend the design certification rule to incorporate "beneficial" changes?

Response to Issue 6: Yes, as noted more fully in Attachment A, Section II, to these comments, Part 52 should allow the original design certification applicant to petition the Commission for rulemaking to amend the design certification rule to incorporate beneficial changes.

Issue 7: Should 10 CFR Part 21 apply to (a) a holder of an ESP but only after the holder references the ESP in a license application and (b) an applicant/vendor of a certified design, but only after the design certification rule is first referenced in a license application?

Response to Issue 7: We believe that neither an ESP nor a certified design could reasonably result in a "substantial safety hazard" if they are not actually referenced in a license application. Accordingly, the Commission should not apply the reporting requirements of Part 21 to the ESP holder or the applicant/vendor for a design certification before they are referenced in a license application or during the pendency of a design certification application. Further, if the design certification applicant does not supply the final design, it should not have any reporting responsibilities under Part 21. Section 206 of the Energy Reorganization Act provides no authorization for such liability. Furthermore, as a practical measure, if the design certification applicant does not supply the final design and has no contractual relationship with the COL applicant, it will not have access to the calculations of the vendor that support the final design and will not be in a position to determine the actual safety significance of any particular defect or noncompliance. Therefore, from both a legal and practical perspective, a design certification applicant should not have any Part 21 responsibility if the applicant is not the vendor for a COL applicant.