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Secretary  
ATTN: Rulemakings and Adjudications Staff  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

**Comments on Proposed Rule, 10 CFR Part 52, "Consideration of Aircraft Impacts for New Nuclear Power Reactor Design," RIN 3150-A119, 72 Federal Register 56287, October 3, 2007**

AREVA NP Inc. (AREVA NP) has reviewed the NRC's proposed rule to amend 10 CFR Part 52 and require applicants for new designs to assess the effects of the impact of a large, commercial aircraft on the nuclear power plant. Based on our review of the proposed final rule, AREVA NP would like to submit comments regarding the proposed rule.

AREVA NP also endorses NEI's comments in its letter to the NRC dated December 17, 2007 on this subject.

Attachment 1 to this letter contains AREVA NP's detailed comments on the proposed final rule.

If you have any questions concerning this letter, please contact Ms. Sandra M. Sloan, AREVA NP Regulatory Affairs Manager for New Plants Deployment. She may be reached by telephone at 434-832-2369 or by e-mail at [sandra.sloan@areva.com](mailto:sandra.sloan@areva.com).

Sincerely,

A handwritten signature in cursive script that reads "Ronnie L. Gardner".

Ronnie L. Gardner, Manager  
Site Operations and Corporate Regulatory Affairs  
AREVA NP Inc.

Enclosures

cc: L. J. Burkhart  
G. Tesfaye  
Project 733

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## Attachment 1

### Comments on Proposed Rule, 10 CFR Part 52 – Consideration of Aircraft Impacts for New Nuclear Power Reactor Designs (RIN 3150-A119)

AREVA NP supports the Commission's efforts to ensure that impacts from large aircraft are examined as part of the reactor design process. AREVA NP provides the following comments on the proposed rule, focusing on areas that warrant further clarification. In addition, AREVA NP responds to each of the NRC's specific requests for comments in the proposed rule.

1. AREVA NP agrees with the Commission that it is prudent for nuclear power plant designers to take into account the potential effects of the impact of a large, commercial aircraft. AREVA NP also agrees that treating the impact of a large, commercial aircraft as a beyond-design-basis event is the appropriate regulatory treatment.
2. AREVA NP agrees that the aircraft impact assessment need not be updated as part of an application for renewal of a design certification, combined license, or manufacturing license. Based on its experience in this technical area, AREVA NP considers the Commission correctly concluded that the assessment of large, commercial aircraft impacts is not an aging-related matter, nor is it based on time-limited considerations. Therefore, requiring that the information be updated as part of a renewal application would not produce a better regulatory outcome.
3. The Commission has made a prudent choice of aircraft characteristics: a large, commercial aircraft of a type used for long distance flights in the United States. Additionally, the assessment should consider aviation fuel loading typically used for such flights. AREVA NP also supports the provision the Commission's proposal that the impact speed and angle of impact should be based considering the ability of both experienced and inexperienced pilots to control large, commercial aircraft at the low altitude representative of a nuclear power plant's low profile. Similarly, AREVA NP supports that the choice of aircraft characteristics and the scenario used for the analysis should not be linked to threat assessments or to any evolution of aircraft design.
4. The Commission should support use of consistent methodologies. The public will benefit if the aircraft impact assessments for different technologies utilize a consistent methodology. To this end, the NRC should review and approve the technical guidance developed by NEI to conduct the aircraft impact assessment. A consistent methodology will also increase the effectiveness of peer reviews.
5. AREVA NP supports the use of realistic assumptions regarding the overall response of the plant to perform the assessments. While the Commission affirms its support for the use of realistic assumptions, the rule itself is silent regarding this aspect of the assessment. The rule should be explicit in this regard. Therefore, AREVA NP supports the NEI proposed 10 CFR 52.500(b) proposed revision as follows:

*(b) Each applicant for a standard design certification not referencing a standard design approval; a standard design approval; a combined license not referencing a standard design certification, standard design*

*approval, manufacture reactor; or a manufacturing license not referencing a standard design certification or standard design approval shall perform a design-specific assessment of the effects on the designed facility of the impact of a large, commercial aircraft. Such assessment must be based on the Commission's specified aircraft characteristics used to define the beyond-design-basis impact of a large, commercial aircraft used for long distance flights in the United States, with aviation fuel loading typically used in such flights, and an impact speed and angle of impact considering the ability of both experienced and inexperienced pilots to control large, commercial aircraft at the low altitude representative of a nuclear power plant's low profile. Such assessment may use realistic assumptions regarding the overall response of plant design features, functional capabilities, and strategies.*

6. The Commission should clarify the meaning of the term "avoid." The proposed rule states that "the application must include a description and evaluation of the design features, functional capabilities, and strategies to avoid or mitigate the effects of the applicable, beyond-design-basis aircraft impact." The Commission should explain that term "avoid" is not be intended to mean preventing an aircraft impact but instead means preventing damage to specific functions.
7. The Commission should also affirm that a design strategy that protects containment, spent fuel pool, and adequate core cooling capability from aircraft damage meets the regulatory objective of the rule and does not need to evaluate or adopt additional design alternatives for preventing or mitigating aircraft impact. AREVA NP considers that method of plant protection optimal. If the rule could be interpreted to require a mitigation strategy regardless of the level of protection, it would dilute the value of a "shield" type design strategy. Vendors should be able to fully realize the technical merits of their design choices
8. Specific Requests for Comments. In addition to the general invitation to submit comments, the Commission requested comments to eight questions:
  - Question No. 1 – Should the Impact Assessment be included in the application?

Information should be included to the extent that similar information is included to support NRC review of similar topics. This level of detail will permit NRC to certify that the design provides adequate consideration of aircraft impacts as part of the design certification rulemaking. Similar to technical information generated to support a Final Safety Analysis Report (FSAR) in other areas, the detailed assessment should be maintained at the applicant's facilities and submitting only the description and evaluation as part of the application required by proposed 10 CFR 52.500(c). For example, applicants are not required to submit the entire Probabilistic Risk Assessment (PRA); instead, the NRC only requires that a summary report be submitted.

The information should be treated as safeguards information the same way that vital equipment information is submitted with an application to support NRC review. NRC should control access to the information based on the same "need to know" test it uses to determine who should have access to the detail aircraft characteristics information.

- Question No. 2 – Should the NRC add acceptance criteria to the Proposed Rule that would reference the dose limits in Part 100?

No. Part 100 limits are intended for design-basis events and require site-specific information. If the Commission includes Part 100 limits it will impose a level of complexity beyond the scope outlined for this rulemaking.

- Question No. 3 – Records Retention

AREVA NP believes that the records retention requirements should apply to Design Certification holders for the period of time that the Design Certification is in effect. The COL Applicant, utilizing existing retention requirements, should be responsible for maintaining the basis for the licensed units for the duration of the license.

- Question No. 4 – Should the NRC treat voluntary requests to amend existing design certifications to address aircraft impacts the same as it treats new applications for design certification?

No comment.

- Question No. 5 – Should the Proposed Rule apply to future 10 CFR Part 50 license applicants?

No Comment.

- Question No. 6 – Should the new requirements be placed in 10 CFR Part 50 or Part 52?

No Comment.

- Question No. 7 – Applicability to design approvals and manufacturing licenses.

No Comment.

- Request for Comments No. 8 – Should the scope of the Impact Assessment for a COL applicant be larger than for a design certification applicant?

No Comment.

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**Date:** Mon, Dec 17, 2007 4:50 PM  
**Subject:** AREVA NP's Comments on Proposed Rule, 10 CFR Part 52, "Consideration of Aircraft Impacts for New Nuclear Power Reactor Design," RIN 3150-AI19, 72 Federal Register 56287, October 3, 2007

Please find attached subject letter, NRC:07:078. Should you have questions regarding this submittal, please contact Sandra Sloan at 434.832.2369.

Thank you.

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