



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON D.C. 20585

**REQUEST REPLY BY:**

February 20, 2007

3/6

COMMISSIONER

COMGBJ-07-0001

Disapprove. See attached comments.

MEMORANDUM TO: Chairman Klein  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Lyons

FROM: Gregory B. Jaczko

SUBJECT: PROPOSAL TO INCLUDE AIRCRAFT IMPACT DESIGN REQUIREMENTS FOR NEW REACTORS

*Dale E. Klein*  
Dale E. Klein

Date

I propose the Commission complete an expedited rulemaking to include a requirement in 10 CFR Part 52 that any new nuclear power plants built in the U.S. be designed to withstand a large commercial aircraft impact. This requirement would apply to any plant not yet constructed and would be based on an assessment performed using a realistic analysis of the threat posed by an aircraft with parameters defined by the Commission.

Since September 11, 2001, the Commission has assessed the potential vulnerabilities of operating nuclear power reactors to aircraft impact. By order dated February 25, 2002, the Commission required all operating power reactors to develop and adopt mitigative strategies to cope with large fires and explosions, whatever the cause but including aircraft impacts. The continuing requirement to provide such mitigative measures is being incorporated in the Commission's regulations in the proposed Part 73 power reactor security requirements, specifically the proposed revisions to 10 CFR. 73.55 and Part 73, Appendix C. Once final, these requirements, promulgated based on adequate protection of the public health and safety and common defense and security, must be satisfied by all current and future power reactors. Any new reactors built, however, should be designed to limit the damage an aircraft impact could cause.

Therefore, applicants should be required to perform an assessment which demonstrates the design of their plant would withstand an aircraft impact such that there would be no release of significant quantities of radioactive materials to the environment, defined as releases requiring measures to limit the exposure of the general public. In order to ensure this standard can be met, applicants should be required to show that in the event of a commercial aircraft impact, their facilities would demonstrate:

- (1) reasonable assurance of the structural integrity of containment, the spent fuel pool and a minimally necessary set of buildings housing the important safety functions;
- (2) reasonable assurance there will be no large fires and explosions due to large quantities of fuel leaking into containment, the spent fuel pool and a minimally necessary set of buildings housing the important safety functions;

**Chairman Klein's Comments on COMGBJ-07-0001**

**Proposal to Include Aircraft Impact Design Requirements for New Reactors**

I disapprove this proposal. I acknowledge Commissioner Jazcko's efforts in moving the Commission forward on this issue, however, I believe that this cause will be better served in the rulemaking I proposed in my vote on SECY-06-0204. In that vote, I propose rulemaking that addresses the regulatory matters associated with new reactor design as it pertains to the ability of the design to mitigate the effects of large fires and explosions, including aircraft impacts. In my view, the rulemaking I propose reflects a reasonable approach to a complex issue, and provides the venue for public comment.

Dale Klein 3/30/07

Dale E. Klein

Date



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NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20585

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MEMORANDUM TO: Chairman Klein  
Commissioner McGaffigan  
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FROM: Gregory B. Jaczko

SUBJECT: PROPOSAL TO INCLUDE AIRCRAFT IMPACT DESIGN  
REQUIREMENTS FOR NEW REACTORS

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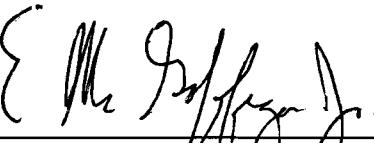
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*I disapproved.  
See attached comments.  
Elliott B. Goff Jr.  
3/23/07*

**Commissioner McGaffigan's Comments on COMGBJ-07-0001**

I disapprove Commissioner Jaczko's proposal for the reasons I have discussed in my vote on the staff's proposal, SECY-06-0204. I would suggest that Commissioner Jaczko clarify one element of his proposal in his vote on SECY-06-0204, namely his "no release of significant quantities of radioactive materials to the environment" standard. At one point, he defines that as "releases requiring measures to limit the exposure of the general public." EPA, FEMA and NRC emergency planning guidelines envision evacuation and/or sheltering to avoid a potential one rem dose to a member of the general public. Indeed, in many emergency planning exercises, State and local governments take protective actions even at the possibility of releases, because of uncertainty in the ability to recover the reactor under the scenario of the exercise. But in his fifth acceptance criterion, Commissioner Jaczko seems to suggest a more relaxed definition of "no release" when he cites 10 CFR Part 100 guidelines, which equate to a 25 rem whole body two-hour dose at the site boundary. Clarification on this point would not change my opposition to the proposal.



3/23/07

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Edward McGaffigan, Jr. (Date)



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

February 20, 2007

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3/6

COMMISSIONER

COMGBJ-07-0001

MEMORANDUM TO: Chairman Klein  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Lyons

*Disapproved.*

*See attached comment*

FROM: Gregory B. Jaczko

SUBJECT: PROPOSAL TO INCLUDE AIRCRAFT IMPACT DESIGN  
REQUIREMENTS FOR NEW REACTORS

7/22/07

I propose the Commission complete an expedited rulemaking to include a requirement in 10 CFR Part 52 that any new nuclear power plants built in the U.S. be designed to withstand a large commercial aircraft impact. This requirement would apply to any plant not yet constructed and would be based on an assessment performed using a realistic analysis of the threat posed by an aircraft with parameters defined by the Commission.

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**Commissioner Merrifield's Comments on COMGBJ-07-0001  
Proposal to Include Aircraft Impact Design Requirements for New Reactors**

I do not support the Commissioner Jaczko's proposal to expedite a rulemaking to require any new nuclear power plant built in the United States to be designed to withstand a large commercial aircraft impact.

Following the events of September 11, 2001, the Commission moved expeditiously to impose requirements on all operating power reactors to develop and adopt mitigative strategies to cope with large fires and explosions that could be caused by aircraft impact or other actions. These mitigative strategy requirements, soon to be contained in our regulations in 10 CFR Part 73, will be required for all operating plants whether they are currently operating or whether they will be operating at some time in the future. These mitigation strategy requirements establish the minimum necessary actions to provide adequate protection of the public health and safety and common defense and security whether the initiating event occurs at a currently operating reactor or one that is yet to be built.

With that said, I can generally support a regulatory tenet that we should expect new reactor vendors to design their facilities so that future licensees would not need to rely as heavily on operator actions to mitigate the effects of an aircraft impact should one occur. My views on the need for requirements for aircraft impacts at nuclear power plants are well established and have prompted substantial discussion among the Commissioners. After appropriate deliberations among all Commissioners, Chairman Klein offered a proposal for rulemaking (in his vote on SECY 06-0204) that encompasses, in my opinion, the breadth of the complex regulatory issues related to mitigation of large fires and explosions, including aircraft impacts, and reflects a reasonable proposal upon which to solicit public comment in a rulemaking process. For that reason, I believe the need for this proposal has been superceded.



3/23/07



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Disapproved.

MEMORANDUM TO: Chairman Klein  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Lyons

FROM: Gregory B. Jaczko

SUBJECT: PROPOSAL TO INCLUDE AIRCRAFT IMPACT DESIGN  
REQUIREMENTS FOR NEW REACTORS

Peter B. Lyons

Date

I propose the Commission complete an expedited rulemaking to include a requirement in 10 CFR Part 52 that any new nuclear power plants built in the U.S. be designed to withstand a large commercial aircraft impact. This requirement would apply to any plant not yet constructed and would be based on an assessment performed using a realistic analysis of the threat posed by an aircraft with parameters defined by the Commission.

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**Commissioner Lyons' Comments on COMGBJ-07-0001**

**Proposal to Include Aircraft Impact Design Requirements for New Reactors**

I disapprove this proposal, not because I believe it lacks merit in certain respects, but because I believe that the Commission's resolution of the question of how to address this specific beyond design basis event will be more efficiently and effectively resolved through the Commission's currently ongoing deliberations related to SECY-06-0204, Proposed Rulemaking - Security Assessment Requirements for New Nuclear Power Reactor Designs.

  
Peter B. Lyons      Date  
2/28/07