



NRC NEWS

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NRC ISSUES FINAL RULE ON NEW REACTOR AIRCRAFT IMPACT ASSESSMENTS

The U.S. Nuclear Regulatory Commission has issued a final rule that requires applicants for new power reactors to assess the ability of their reactor designs to avoid or mitigate the effects of a large commercial aircraft impact.

“This is a common sense approach to address an issue raised by the tragic events of Sept. 11, 2001,” said NRC Chairman Dale Klein, adding that some of the credit for resolving the issue is due to the efforts of the late Commissioner Edward McGaffigan. “Without the energy he devoted to this effort every day, up to the week he died, the Commission may never have been able to come to common ground on this very important issue. I am quite confident that this rule will be an important element in the regulatory framework for new reactor applications that will result in a margin of safety far beyond that required to achieve reasonable assurance of public health and safety.”

Nuclear power plants are designed under very stringent requirements to assure they can safely shut down following “design-basis events” such as large fires, floods, earthquakes and hurricanes, as well as improbable equipment malfunctions including pipe breaks. These requirements include having two redundant systems to accomplish each safety function. The rule treats large commercial aircraft crashes as “beyond-design-basis events.”

Under the rule, any design feature or functional capability adopted solely to comply with the rule will meet high quality standards but is exempt from NRC design-basis regulations, such as regulations for redundancy. These design features and functional capabilities must address core cooling capability, containment integrity, spent fuel cooling capability, and spent fuel pool integrity following an aircraft impact.

The NRC has already taken several steps to improve security at existing nuclear power plants, including adopting a rule in March 2007 that requires both existing and potential new reactors to defend against a more realistic threat. The agency also issued a February 2002 Order requiring all existing nuclear power plants to develop and adopt mitigative strategies to cope

with large fires and explosions from any cause, including beyond-design-basis aircraft impacts. The NRC voted in December 2008 to codify these requirements in a separate rule for all existing and future nuclear power plants.

The agency does not believe nuclear power plant operators should be required to prevent the impact of large commercial aircraft; that responsibility rests with the federal government. The NRC works closely with other federal agencies such as NORAD, the Federal Aviation Administration and the intelligence community to provide layered protection against such a threat. The agency expects these efforts would effectively preclude an aircraft attack from occurring. Should such an unlikely event take place at a new plant designed in accordance with the new rule, the NRC expects the plant would be better able to withstand such a crash than the same design without changes resulting from the rule.

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