



NRC NEWS

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Office of Public Affairs Telephone: 301/415-8200

Washington, D.C. 20555-0001

E-mail: opa_resource@nrc.gov Site: www.nrc.gov

Blog: <http://public-blog.nrc-gateway.gov>

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NRC EXAMINING POTENTIAL IMPACT ON NUCLEAR PLANT SAFETY FROM UPSTREAM DAM FAILURE

The Nuclear Regulatory Commission has started a formal evaluation of potential generic safety implications for dam failures upstream of U.S. commercial nuclear power plants. The NRC began examining this issue after inspection findings at two plants and recently completed an initial screening assessment.

While this screening did not identify any immediate safety concerns, inspections or other reviews at individual plants have led to those plants taking appropriate actions regarding flooding scenarios. Based on the screening, the NRC staff has recommended that flooding from upstream dam failure be further evaluated as part of implementing recommendations from the agency's Japan Near-Term Task Force.

While the Task Force used preliminary information from the screening and mentioned flooding in its [July 2011 report](#), the upstream dam issue came to the staff's attention long before the current interest in natural disasters raised by the Japan earthquake/tsunami and reactor accident. New sources of information on this issue have accumulated over the past few years. This information includes inspections of flood protection and related procedures, as well as recent re-evaluations of dam failure frequencies and possible flood heights at some U.S. nuclear power plants, suggesting that flooding effects in some cases may be greater than previously expected.

The staff is also using the NRC's [Generic Issue Program](#) to consider the effects of upstream dam failure on independent spent fuel storage installations. Similarly, a Generic Issue has been proposed on the effects of failure of downstream dams on nuclear power plants. The NRC's [Office of Nuclear Regulatory Research](#) manages the Generic Issues Program. The effects of flooding on fuel cycle facilities are addressed through existing regulations and inspections being conducted by the NRC's [Office of Nuclear Material Safety and Safeguards](#).

The Task Force's review of the Fukushima accident led to recommendations regarding the potential for flooding at operating reactors. Assessing flooding from upstream dam failure at operating reactors will be merged with NRC's actions on the Task Force recommendations, since the recommended actions encompass the scope of the new issue.

Nuclear power plant designs include protection against serious but very rare flooding events, including flooding from dam failure scenarios. Dam failures can occur as a consequence of earthquakes, overflow, and other mechanisms such as internal erosion and operational failures. A dam failure could potentially cause flooding at a nuclear power plant site depending on a number of factors including the location of the dam, reservoir volume, dam properties, flood routing, and site characteristics.

The NRC's screening assessment of potential nuclear plant safety issues from upstream dam failures will be available in [ADAMS](#) under ML113500495.

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NOTE: Anyone wishing to take photos or use a camera to record any portion of a NRC meeting should contact the Office of Public Affairs beforehand.

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