February 10, 2012

MEMORANDUM TO: Benjamin Beasley, Chief
Operating Experience and Generic Issues Branch
Division of Risk Analysis
Office of Nuclear Regulatory Research

FROM: Michele Sampson, Chief **/RA/**
Thermal and Containment Branch
Division of Spent Fuel Storage
and Transportation
Office of Nuclear Material Safety and Safeguards

SUBJECT: PROPOSAL OF A GENERIC ISSUE RELATED TO THE EFFECT OF EXTERNAL FLOODING ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

The purpose of this memorandum is to propose a Generic Issue related to the external flooding of independent spent fuel storage installations (ISFSIs). The issue is being proposed, in part, because estimates of the likelihood of dam failure may be higher than previously estimated. ISFSIs are often located above ground on unsheltered concrete pads or in underground storage vaults. Depending on site and environmental characteristics, there is a potential for inundation of these facilities by flood waters. The potential adverse effects of flooding might include changes in the thermal performance of the dry cask storage system, structural effects from sliding or overturning, and, in the unlikely event of a breach to the confinement system, the release of radioactive materials or in-leakage of flood water. Further evaluation is needed to determine if there is a potential for consequence to public health and safety in the event of external flooding to an ISFSI.

A Generic Issue is a well-defined, discrete technical or security issue, the risk and/or safety significance of which can be adequately determined, and which meets seven specific criteria, as outlined in NUREG/BR-0478, Rev. 1. It appears that the potential effects of external flooding on ISFSIs should be further evaluated under the Generic Issues Program.

CONTACT: Jimmy Chang, NMSS/SFST/TCB
301-492-3272

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