

July 11, 2006

Michael T. Ryan, Chairman
Advisory Committee on Nuclear Waste
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: FUTURE VOLCANISM AT YUCCA MOUNTAIN - RESPONSE TO THE
ADVISORY COMMITTEE ON NUCLEAR WASTE COMMENTS ON THE
U.S. NUCLEAR REGULATORY COMMISSION'S STAFF MODEL FOR THE
FLUVIAL REDISTRIBUTION OF VOLCANIC TEPHRA

Dear Dr. Ryan:

I am responding to your letter of June 9, 2006, on: "Future Volcanism at Yucca Mountain - Comments on the U.S. Nuclear Regulatory Commission's (NRC) Staff Model for the Fluvial Redistribution of Volcanic Tephra." Your letter provided Advisory Committee on Nuclear Waste (ACNW) recommendations arising from a briefing by the NRC staff on the status of modeling the fluvial (water-driven) redistribution of tephra from a potential igneous event at the proposed Yucca Mountain repository. Specifically, ACNW recommended the following:

1. The Committee considers the sediment mass balance method to be conceptually appropriate for modeling the redistribution of radionuclide-bearing tephra to the vicinity of the reasonably maximally exposed individual, but recommends that the NRC staff consider the effects of both wind and fluvial erosion and redistribution, so as to be realistic and effective.
2. The fluvial redistribution modeling should evaluate the effects of large flood events that could carry suspended sediments beyond the active fan and erode previously deposited sediments on the active fan.
3. The NRC staff should review and document its basis for selecting the modeling parameters, assumptions, and processes, such as those presented in observation 2.

M. Ryan

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Enclosed, please find the staff's responses to the recommendations in your letter. Staff appreciates the Committee's independent oversight and looks forward to continued NRC/ACNW interactions.

Sincerely,

/RA/

Luis A. Reyes
Executive Director
for Operations

Enclosure:

Staff's Response to the June 9, 2006,
ACNW letter: "Future Volcanism at Yucca
Mountain - Comments on the NRC Staff
Model for the Fluvial Redistribution of
Volcanic Tephra"

cc: Chairman Klein
Commissioner McGaffigan
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons
SECY

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cc: Chairman Klein
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