

April 14, 2010

MEMORANDUM TO: Mark A. Cunningham, Director
Division of Risk Assessment
Office of Nuclear Reactor Regulation

THRU: Lois M. James, Chief **/RA/**
Probabilistic Risk Assessment Operational
Support Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

FROM: Jeffrey T. Mitman, Senior Reliability and Risk Analyst **/RA/**
Probabilistic Risk Assessment Operational
Support Branch
Division of Risk Assessment
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SUBJECT: GENERIC FAILURE RATE EVALUATION FOR THE
JOCASSEE DAM

The Probabilistic Risk Assessment Operational Support Branch (APOB) evaluated data on large dams in the U.S. to determine a generic failure rate applicable to the Jocassee Dam. This evaluation was initially performed in the middle of 2007. The attached evaluation updates and documents that analysis.

The staff estimated generic dam failure rates for large rockfill dams, which it considers applicable to the Jocassee Dam, as $2.8\text{E-}4/\text{dam-year}$. Given the nature of the data and the assumptions involved in narrowing the applicable failure events and subset of the U.S. dam population comparable to this specific dam, the staff performed a Bayesian analysis. Using available data on the domestic inventory of dams and dam failures, the range obtained varies between $1.3\text{E-}4/\text{dam-year}$ and $4.8\text{E-}4/\text{dam-year}$ (5th – 95th percentile) around a mean of $2.8\text{E-}4/\text{dam-year}$.

Enclosure:
Generic Failure Rate Evaluation for Jocassee Dam

CONTACT: Jeff Mitman, NRR/DRA/APOB
301-415-2843

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