

From: Diane Jackson *NH*
To: GTH *George Hubbard NH*
Date: Wed, Jul 5, 2000 6:05 PM
Subject: scenario boxes

George -

I reviewed the RES's and Joe's writeup about scenarios changing the 1 and 5 year times.

Attached is the table.

Diane

CC: Joseph Staudenmeier, Tanya Eaton

Q1199

VARIATIONS TO SCENARIOS IN CURRENT ANALYSIS

Scenario	Variations	Comments or effect	1 year	5 years
Fast full drain down	High ventilation	Analyzed case	10 hours	fire not possible
	Low ventilation	Increased heat up rate	less than 10 hours	fire possible
	Deformed geometry	Intact geometry questionable assumption for 3X SSE seismic event	?	?
	Breakaway oxidation	Exposes new (local) areas for oxidation Effect depends on size of flakes and thickness of oxide layer 2 (faster) to 20 (slower) microns	less than 10 hours	fire possible
	Hydriding	Oxidation layer breakaway leaving (local) areas of exposed for Zr hydride-air reaction (Rx faster than with oxide layer)	less than 10 hours	fire possible
	Fuel Fines (and Ru) release	Could lower maximum temperature; could occur with clad burst	less than 10 hours	fire possible
	Creep Failure	Could lower maximum temperature	less than 10 hours	fire possible
Fast partial drain down		Lower heat removal rate; Hydrogen buildup	less than 10 hours	fire possible