

US EPA ARCHIVE DOCUMENT

October 2011 – SDI FEP Issues

Heat Conduction Issues (HC)	
SDI(HC) -1	DOE needs to provide additional information of lower thermally conductive -higher porosity 'run-of-mine' salt emplaced around the heaters.
	Background: Halite thermal conductivity (k) is inversely related to porosity. The higher porosity of the run-of-mine salt would conduct less heat away from the heater than that analyzed here, and potentially produce higher temperatures at the waste panels than currently predicted.
SDI(HC) -2	DOE needs to provide additional information on the higher temperature-lower thermally conductive nature of halite and its affect on distal temperatures.
	Background: Halite thermal k is inversely related to temperature. A higher temperature halite and run-of-mine salt would conduct less heat away from the heater and potentially produce a thermal dam and EPA is looking for information to address the issue.
Heat Effects on Host Rock Properties (HRP)	
Clay Seams	
SDI-(HRP) -1	What are the expected effects of a 300°C temperature source on the clay inter-beds properties located in the SDI experimental area?
	Background: In the development of the Salado conceptual and numerical flow and transport model there has been significant effort to incorporate the clay seam properties. We are interested to have information that addresses the expected affect on moisture and stability.
Anhydrite layers - Marker Beds	
SDI(HRP)-2	What are the expected effects of a 300°C temperature source on the anhydrite layer properties?
	Background: There has been significant effort to incorporate the properties of the anhydrite layers in the development of the Salado conceptual and numerical flow and transport model. Would the temperatures be expected to affect the fracture formation threshold pressure or propagation length?