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Ground Water Concerns At The Repository For High-Level Radioactive Waste

I would like to thank the panel from the Department of Energy for hosting this hearing in St. Louis, Missouri. This hearing is being held in a city that is water rich. In fact, there are times when many native Missourians feel we have too much water. Before reading the draft, Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, I had not realized just how fragile and active the ground water system is at the repository site. The panel this evening for The Department of Energy knows well that there have been extensive studies of the ground water system, both under the proposed depository site at Yucca Mountain, as well as the surrounding area. Whereas there are differences of opinion between the experts, some hard facts cannot be disputed. [The Department of Energy has collected ground water information from regional wells at Yucca Mountain since 1983. The United States Geological Survey has accumulated and evaluated data for almost ninety years in the Yucca Mountain region, including in recent years, collecting samples and data from ground water sources in the Amargosa Desert, and three from the immediate vicinity of Yucca Mountain. It has been established that ground water at Yucca Mountain occurs in an unsaturated zone and a saturated zone. It has been established that the ground water flow system in the area is very complex, involving many aquifers and confining units. In some areas, confining units allow considerable movement between aquifers. The entire drainage basin or regional ground water flow system covers approximately 16,000 square miles. In the area around and below Yucca Mountain, the ground water aquifers flow generally south towards discharge areas in the Amargosa Desert and Death Valley. Rain water infiltrating at the Yucca Mountain site and re-charging the existing ground water, also becomes a hydrologic factor.

The entire system is certainly complex, including but not limited to, sub-basins, estimations of average infiltration and annual ground water movement. It is clear that where geologists, geotechnical engineers, and other experts disagree on the subtle differences between sub-basins and data, such as hydro-geologic units or ground water flow in a specific area under low thermo load. What is agreed on by virtually everyone who has read and become familiar with the information is that the ground water system is active. The aquifers are flowing. The entire system is re-charging; sometimes faster, sometimes slower. The Yucca Mountain desert region is not void of water. In fact, ground water is moving there today, as this meeting is taking place.

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1 cont. [The thought of protecting ground water at any site for millennium is hard for me to conceive.] It reminds me of reading a short reply by Mark Twain, when he was asked to comment on the government's efforts to channelize and control the Mississippi River. Twain, who had spent time piloting river boats, said something to the affect that he had to admire the supreme arrogance of men who think they can control the Mississippi River, but he did not have to believe them. Anyone who happen^{ed} to spend just one hour along the Mississippi during the summer of 1993, knows exactly what the results were after spending billions of taxpayer dollars to control and tame the Mississippi.

1 cont. In closing, [what the Department of Energy is proposing is very, very dangerous.] I
2 do agree that there must be a reasonable solution to the horrible problem of nuclear waste. We can start today with conservation and decommissioning every nuclear reactor that is creating the problem.] Please, I beg of you, think of your children's children when you make your decisions. Thank you for allowing me to speak.

