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4.1 earthquake rattles Nevada security site near Yucca Mountain

By Keith Rogers Las Vegas Review-Journal
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Geologists say a small earthquake that shook the Nevada National Security Site early Monday occurred along the same fault as a swarm of earthquakes that rocked the area in 1999.

The 4.1 magnitude earthquake at 2:27 a.m. was centered about 7 miles northeast of the government town of Mercury at the security site and 4.2 miles below the surface, U.S. Geological Survey geophysicist Julie Dutton said.

The location is about 30 miles north of Pahrump and 65 miles northwest of Las Vegas. It's also approximately 33 miles southeast of the proposed Yucca Mountain nuclear waste repository in Nye County.

No injuries or damage were reported, said Darwin Morgan, a National Nuclear Security Administration spokesman.

"People did feel it at the Mercury Operations Control Center," Morgan said.

Nevada State Geologist Jim Faulds said the Rock Valley Fault zone has a recent history of generating small earthquakes, including a January 1999 swarm that included eight earthquakes between magnitudes 3 and 4.7.

"I don't think it's a concern for a larger earthquake, but you never know," Faulds said.

The magnitude 5.6 Little Skull Mountain earthquake June 29, 1992, was centered 3 miles from a surface trace of the Rock Valley Fault zone and 12 miles from Yucca Mountain. It knocked out windows and cracked walls at the Yucca Mountain Project field operations center.

The magnitude 7.4 Landers, California, earthquake, 190 miles south of Yucca Mountain, preceded the Little Skull Mountain quake by 22 hours and triggered a 3.6-foot rise in water in a well 2 miles from Yucca Mountain.

With a length of 40 miles, the Rock Valley Fault is capable of producing strong earthquakes in the magnitude 7 range, said Ryan Gold, a U.S. Geological Survey research geologist in

Golden, Colorado. He said the Rock Valley Fault is a left-lateral, strike-slip fault, like the San Andreas Fault in California, except that it is much smaller and runs in an east-west direction instead of north-south.

The State of Nevada Nuclear Waste Project Office website describes [earthquake activity as a safety concern](#) for operation of a high-level nuclear waste repository at Yucca Mountain.

There have been 621 seismic events of magnitudes greater than 2.5 within a 50-mile radius of the mountain since 1976, according to the state's website.

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