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EPA to Seal Wells at the Geysers

*Concern that lethal gas could
be released in Sonoma.*

Jim Doyle, Chronicle North Bay Bureau

Emergency environmental crews are moving to cap abandoned geothermal wells at the Geysers in Sonoma County because of fears that they could erupt and release a lethal gas.

The U.S. Environmental Protection Agency's emergency response team plans to spend nearly \$1 million in the next few months to cap seven of 24 "orphaned" wells at the site.

State and county agencies are hoping to obtain \$1.5 million in additional financing and hire contractors to cap the remaining 17 wells before the next rainy season.

"We have a group of wells that are deteriorating and we want to get to them before they blow," Terry Brubaker, chief of EPA's emergency response office in San Francisco, said yesterday.

"The hydrogen sulfide that's in these wells is about as toxic a

compound as you can get," he said. "There's measurable amounts of leakage of hydrogen sulfide around the wells. We want to get these capped before there's a catastrophic, uncontrolled release."

He said that an eruption of the gas - which smells like rotten eggs - would threaten workers at nearby steam fields and on nearby highways as well as a few residents in the remote area. The steam fields lie about 16 miles northeast of Healdsburg in rugged, mountainous terrain.

"A lot depends on the way the wind blows," Brubaker said. "An uncontrolled release could result in a large concentration of gas that would kill everything in its path until it dissipates."

An eruption would have to be capped while it is discharging steam and debris into the air. Heavy drilling equipment would have to be moved into place on roads that are in disrepair. The

process could take several hours.

The old well bores are roughly 1 1/2 miles deep and 2 feet in diameter. To permanently cap the wells, cement must be poured into the bores.

The 24 wells were operated by the GEO Operation Corp., which went bankrupt in the late 1980s. The power plant supplied by the 24 wells was shut down in 1989, but the wells were not permanently decommissioned and only temporary caps were put on, which have corroded, Brubaker said.

Steam fields in the Geysers have long supplied electricity to Northern California by using high-pressure steam from beneath the earth's surface to drive turbines, but production dropped in the 1980s and many of the wells were closed.

State and county authorities have monitored the abandoned wells for years. Recently, they voiced concern that seismic activity and landslides near the well heads could trigger an eruption.

"There are lots of microearthquakes here," said Ken Stelling, a state geothermal engineer. "You have a lot of little tremors all the time, and because of that, there's earth movement and slippage when it rains,"

A few months ago, state and county officials asked for assistance from the federal government to cap the wells that needed the most urgent attention. In addition, Sonoma County has applied for a \$1.5 million grant from the California Energy Commission to hire contractors



Abandoned geothermal well in Sonoma County

to plug the remaining wells.

The capping is a joint project by the EPA's Superfund program, Sonoma County, the California Energy Commission, and the oil, gas and geothermal resources division of the California Department of Conservation. The work is expected to begin in May.

"It's what we call a yawning emergency, as opposed to a screaming emergency," the EPA's Brubaker said. "It means that we move with dispatch, but we don't panic." ■

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