After Quakes, Ohio Plans Tough Gas-Drilling Rules

JULIE CARR SMYTH,Associated Press

COLUMBUS, Ohio (AP) — A dozen earthquakes in northeastern Ohio were almost certainly induced by injection of gas-drilling wastewater into the earth, state regulators said Friday as they announced a series of tough new rules for drillers.

Among the new regulations: Well operators must submit more comprehensive geological data when requesting a drill site, and the chemical makeup of all drilling wastewater must be tracked electronically.

Both could mean extra costs for gas drillers looking for new wells and ways to get rid of wastewater — much of which is trucked into Ohio from Pennsylvania, the region's top gas-producing state.

The state Department of Natural Resources announced the tough new brine injection regulations because of the report's findings on the well in Youngstown, which it said were based on "a number of coincidental circumstances."

For one, investigators said, the well began operations just three months ahead of the first quake.

They also noted that the seismic activity, which began in March 2011 and ended at the end of the year, was clustered around the well bore, and reported that a fault has since been identified in the rock layer where water was being injected.

"Our evidence strongly suggests that the injection fluid lubricated a previously unmapped fault and contributed to seismic activity," said Natural Resources spokesman Carlo LoParo. "It was an unfortunate situation, and the operator drilled the well to specifications and operated within all permitted levels."

The report said: "Geologists believe it is very difficult for all conditions to be met to induce seismic events. In fact, all the evidence indicates that properly located ... injection wells will not cause earthquakes."

The Youngstown well's operator, D&L Energy Inc., noted as much Friday in a statement reacting to the state report and the new regulations. D&L pointed out that the state did not actually test the well during its investigation, relying instead of geologic and seismic data.

D&L said there is "no reason to rush and accept bad or incomplete science" until the company's own studies, commissioned from two separate consultants, can be reviewed. The company also noted the well is no longer taking wastewater because a self-imposed moratorium that Gov. John Kasich extended to 5 miles around it.

Northeastern Ohio and large parts of adjacent states sit atop the Utica and Marcellus Shale geological formations, which contain vast reserves of natural gas that energy companies are rushing to drill using a process known as hydraulic fracturing, or fracking.

That process involves freeing the gas by injecting huge amounts of chemical-laced

water into the earth at high pressure, but the water that comes back up needs to be disposed of.

Municipal water treatment plants aren't designed to remove some of the contaminants found in the wastewater, including radioactive elements. Deep injection is considered one of the safest methods for disposal, though earthquakes — most very small but some, like in Youngstown, large enough to be felt — have been linked to such methods.

Pennsylvania and other drilling states could see nearly immediate impacts from the Ohio rules.

Pennsylvania has limited the deep injection of wastewater because its geology precludes it. Six of its deep injection wells accept fracking fluid. Ohio has 177 such wells.

Drillers in Pennsylvania sent almost 1.5 million barrels of waste to injection wells in Ohio during the second half of 2011, said Kevin Sunday, a spokesman for the Pennsylvania Department of Environmental Protection.

But with Ohio now planning to require electronic monitoring of wastewater, and that technology not widely available yet, Pennsylvania and other states seeking to send wastewater to Ohio may need a Plan B in the interim.

Among the new regulations in Ohio:

— Future injection into Precambrian rock will be banned, and existing wells penetrating the formation will be plugged.

— State-of-the-art pressure and volume monitoring will be required, including automatic shut-off systems.

— Electronic tracking systems will be required that identify the makeup of all drilling wastewater fluids entering the state.

The state's report validates concerns among environmentalists that Ohio is moving too fast, said Jed Thorp, manager of the Ohio chapter of the Sierra Club.

"This proves that we need to have data and research and regulations in place before these activities begin. The problem here is that they let everybody go over there and start punching holes in the ground before there was data and adequate research," he said. "So now we're in a position of having to create regulations after the fact. That's really a backward way to do it."

The Sierra Club, the Ohio Environmental Council and other members of a coalition watching the boon in oil and gas drilling activity planned to send a letter to the state Friday asking for a public forum on the report, Thorp said.

The U.S. Environmental Protection Agency gave Ohio regulatory authority over its

deep well injection program in 1983, deeming that its state regulations met or exceeded federal standards. The new regulations would be added to those existing rules.

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