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Scientists say tests show metals in W.Va. coal slurry

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MORGANTOWN, W.Va. (AP) -- West Virginians eager to know what's in the slurry that coal companies pump into worked-out underground mines will have to wait until May for the state's answers, but preliminary independent tests suggest it contains heavy metals they wouldn't want to drink.

Lab results, shared with The Associated Press by citizen activists with the Sludge Safety Project who plan to make their findings public Thursday, detected arsenic, lead and several other metals at levels exceeding federal drinking water standards.

Slurry, a byproduct of washing coal, is what's left after operators remove clay, dirt, sulfur and other impurities to meet demand for coal that burns efficiently.

For decades, slurry has been injected into abandoned mines in Appalachia as a cheap alternative to massive dams or filtration and drying systems. But hundreds of coalfield residents are now suing coal companies, claiming that waste has leaked into aquifers, contaminated well water and caused health problems from kidney disease to cancer.

The U.S. Environmental Protection agency has long allowed states to use old mines as "backfill wells" for waste, documenting some 5,000 of them in 17 states when it last counted in 1999. But the EPA said that includes sites used to store sludge, ash, sand, cement and other materials, and it cannot identify wells by subcategories.

That means it's impossible to know how many of the sites contain coal slurry.

A survey of several Appalachian states suggests the practice is rare in Pennsylvania and Ohio, which reported only two slurry injection sites each. Alabama says operators there have 11 active injection sites, while Kentucky reports 14.

West Virginia regulators permit 15 companies to inject slurry, but the practice of injecting waste is broader: A 2008 report cites 50 injection sites for slurry and sludge, with a total of 600 pipes into the ground.

The growing concern in West Virginia has legislators and the state Department of Environmental Protection focused on a potential public health problem that for years only mattered to people with black and orange water spewing from their taps.

To comply with a legislative inquiry on whether underground injection is safe, the DEP is testing water and slurry samples from six sites in Monongalia, McDowell, Raleigh, Nicholas, Kanawha and Boone counties.

Those results will be made public in early May, DEP spokeswoman Kathy Cosco told the AP this week. Then the Department of Health and Human Resources will decide if there is a potential health threat.

But DEP also shared samples with scientists at Wheeling Jesuit University, who sent them to Heidelberg University's National Center for Water Quality Research in Tiffin, Ohio.

Those tests found six metals -- antimony, arsenic, lead, barium, cadmium and chromium -- in levels that exceeded federal standards for primary drinking water at one or more sites, said chemist Mary Ellen Cassidy and biologist Ben Stout.

What's unclear, Cassidy said, is whether DEP's samples came from the pipe where the slurry is injected or the underground pool where it is stored. In theory, slurry is pumped into a void where the solids settle out and the water remains trapped as long as the geology is undisturbed.

The tests also found high levels of metals in the solids at all six sites, the scientists said.

Primary drinking water standards are set by the federal government to protect public water supplies from substances known to cause health problems.

Though federal regulations don't apply to unregulated, private wells, Cassidy and Stout argue it's fair to hold industry to them: DEP said in documents last year that it would deny injection permits "if an existing mine pool is being used as a potable water source for even one person."

The West Virginia Coal Association argues that if injection weren't safe, the EPA wouldn't allow it. Slurry, it argues, is a benign blend of coal, dirt, water and chemicals that help suspended solids clump together.

But EPA hasn't studied the issue in a decade, and DEP director Randy Huffman has acknowledged he has concerns and questions.

There is no consensus on the chemical composition of slurry or whether it is hazardous to human health if ingested over decades, as some coalfields residents believe they have done. Nor can state or federal regulators say how much slurry has been pumped underground.

Last week, state Sen. Randy White, saying he was frustrated by delays in DEP's research, introduced legislation that would ban slurry injection starting May 1. So far, no action has been taken on the Webster County Democrat's bill.

