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Ameren coal ash used as mine fill near Ste. Genevieve



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 JTOMICH@POST-DISPATCH.COM > 314-340-8320

STE. GENEVIEVE • Ameren Missouri has spent the past four years engaged in a bitter fight with Labadie-area residents over a proposal to pile millions of cubic yards of coal ash on a plot of cropland by the Missouri River.

Since 2009, debate has shifted from the Franklin County Commission to the courts and the Missouri Public Service Commission.

Ameren has gone to great lengths to keep that project moving forward. And so far, it has prevailed over the opposition.

Meanwhile, the utility has found a very different way of getting rid of ash from another of its power plants. It's sending truckloads of ash from its Rush Island plant for disposal in an inactive section of Mississippi Lime Co.'s cavernous limestone mine near Ste. Genevieve.

Unlike Labadie, the mine disposal hasn't stoked controversy. There's been no public outcry and only limited review by regulators. Mississippi Lime says both companies benefit from the arrangement, but environmental groups contend the region's water supply could be at risk.

Right now, using coal ash as backfill for mine reclamation is being done on a trial basis, said Bill Ayers, Mississippi Lime's president. He indicated that Ameren is paying Mississippi Lime to take the ash but declined to provide any specifics of the agreement, including the quantity of material being placed in the mine.

"It's beneficial to use the void space in our mine in an economical way," he said. "And I think certainly putting it in an area like this might be a better option than putting it in a landfill."

Mississippi Lime, Ayers said, has operated in the Ste. Genevieve area since the 1920s and established a record of environmental stewardship. And the company received approval from state regulators to place ash in the mine.

"This is a very controlled environment, a very safe environment," he said. "So there's certainly an opportunity for us to help out Ameren and to provide an opportunity for our company as well."

Ameren Missouri, meanwhile, said it's acting as a supplier of material to Mississippi Lime, and that it is not receiving any benefit from the arrangement. The utility declined to confirm that it's paying Mississippi Lime.

Utility spokeswoman Rita Holmes-Bobo said the utility doesn't view the arrangement with Mississippi Lime, which for now is just a 60-day trial, as part of its ash management strategy.

"They approached us and asked us for our material," she said. "We're glad to provide it."

Ameren, meanwhile, is still pursuing plans for new ash landfills at its Meramec plant in south St. Louis County and Rush Island plant in Jefferson County. The utility has approval from state regulators to perform a detailed site investigation for the Rush Island site, but work on the Meramec site hasn't advanced as far.

In contrast to the proposed ash landfills, which are regulated under Missouri's solid waste laws and require liners and public vetting, injecting coal ash into a mine is exempt from requiring a solid waste permit because the Department of Natural Resources has agreed the project qualifies as "beneficial" reuse — a utility industry term that means to recycle coal ash.

Not everyone sees the benefit.

John Hickey, director of the Missouri Chapter of the Sierra Club, believes the combination of coal ash and the karst topography of Ste. Genevieve County is a recipe for trouble.

Correspondence between Mississippi Lime and the DNR even cites a 1985 report that makes reference to the sinkholes, caves and "heavily fractured" rock in the area of the mine that direct groundwater into the mine.

"Given that a lot of people in that area get their drinking water from the Mississippi River or wells, it makes it of particular concern," Hickey said.

Public records also show the DNR also received an inquiry from the superintendent of the Public Water Supply District No. 1 of Ste. Genevieve County, which has a well about three miles away.

A condition of DNR approval of the ash injection project requires Mississippi Lime to test for metals in water that come in contact with the ash before the water is pumped out of the mine. Samples are to be analyzed for the presence of metals such as arsenic, chromium, lead, mercury and selenium.

Mississippi Lime's approval letter from the DNR suggests only talcum-like fly ash would be placed in the mine, and that the ash would be mixed with just enough water so that it would harden like concrete.

But Environmental Protection Agency data show lighter fly ash actually contains heavier concentrations of contaminants than coarser bottom ash.

The company is required to submit a final report on the pilot project within 60 days of completion. And it must amend an existing environmental permit if it chooses to proceed with ash placement beyond the scope of the current pilot project, and commit to monitor groundwater around the injection site.

RECYCLING VS. DISPOSAL

The U.S. produces more than 130 million tons of coal ash annually — a byproduct of burning pulverized coal for electricity generation. The material consists mostly of oxides of silicon, iron, aluminum, and calcium as well as other trace metals.

Much of the ash is disposed of in landfills, impoundments and sludge ponds. But increasingly, it's being reused, or recycled, sprouting a multibillion-dollar industry.

Today, almost half of the coal ash generated at power plants is used in building materials, as filler material in construction projects and placed in mines and quarries. Ameren, in fact, recycles tens of thousands of tons of fly and bottom ash annually from its Labadie plant into concrete mix sold at local home improvement stores.

The American Coal Ash Association, a national trade association, says recycling ash has numerous benefits. It saves natural resources, reduces greenhouse gas emissions and limits the need for additional land that would be required for ash disposal.

Critics, however, say there's a distinct line between recycling and disposal that's too often blurred. Using ash at construction sites and placing it into mines and quarries is worrisome, environmental groups contend, because harmful metals can leach into groundwater.

Ameren Corp., in fact, faces a complaint from the Illinois attorney general last month for using 180,000 tons of ash as fill material at a power plant just outside of Peoria despite the fact that the ash contained levels of pollutants that exceed state drinking water standards.

Lisa Evans, an attorney for the environmental advocacy group Earthjustice, said a distinction should be made between ash used in bricks, cement or other encapsulated uses and ash used as fill material where contaminants can foul groundwater.

"Regulators frequently look the other way when it comes to reuse," Evans said. "Utilities often take advantage of this public health loophole by shoving through as much waste as they can to avoid the much higher disposal cost of placement in engineered landfills."

Utilities in Missouri, in fact, have wide latitude to utilize coal ash as they want if it's done in the name of beneficial use. In parts of the state, ash is used instead of salt for snow removal.

And while rules proposed by the EPA in the wake of the 2009 Tennessee Valley Authority coal ash disaster could shut down older unlined ash ponds in the state, they wouldn't affect beneficial use of ash.

The use of coal ash as mine fill isn't new. In other parts of the country, ash is placed in abandoned coal mines to control acid runoff or placed in quarries and pits as part of the reclamation process.

The issue got enough attention that the National Academy of Sciences conducted a study in 2006 of ash placement in coal mines, concluding that the practice may be an appropriate disposal option, but only if the ash and the site are properly characterized. It also urged public involvement in permitting process and recommended the adoption of federal standards to make sure states follow through with adequate safeguards to protect groundwater and the environment. Such standards have yet to be adopted.

In western Missouri, ash has been used for almost two decades to stabilize abandoned limestone mines so that surfaces above could be used for commercial development.

While no groundwater problems have been discovered, Hickey of the Sierra Club believes it's because regulators aren't looking hard enough.

The Sierra Club recently challenged a permit for injection of coal ash near Kansas City, he said, only to find that groundwater monitors had been placed upgradient of the injection site, not where they would detect pollution. "We lack confidence in DNR," he said.