

Feds expect to decide this year on Mosaic's 'radioactive roads' plan in Florida

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Federal environmental regulators said they expect to decide this year on a controversial proposal that would allow Tampa-based Fortune 500 mining company Mosaic to test its phosphate waste as an ingredient in

road construction.

The U.S. Environmental Protection Agency informed Mosaic in a May 20 letter that the agency is reviewing the company's proposal to blend 1,200 tons of its mildly radioactive waste byproduct, called phosphogypsum, into a test roadway at the company's New Wales plant in Mulberry. An agency spokesperson told the Tampa Bay Times they expect a decision by the end of the year.

Phosphogypsum is the material left behind when Mosaic mines phosphate ore across Central Florida's Bone Valley and turns it into an ingredient for fertilizer. The byproduct contains radium-226, which emits radiation during its decay to form radon, a potentially cancer-causing, radioactive gas, according to the U.S. Environmental Protection Agency.

Right now, Mosaic stores its phosphogypsum in several "gypstacks" across Florida. Mosaic in 2022 asked the feds for the test road on the company's property to be 1,200 feet long with up to 500 tons of phosphogypsum, but last year expanded its proposal to make it 3,200 feet with up to 1,200 tons under the advice of Florida Gov. Ron DeSantis' state transportation agency.

DeSantis last year signed a controversial bill that allowed the Florida Department of Transportation to study using phosphogypsum in roadways and release a report by April. The measure, dubbed the "radioactive roads" bill by critics, was lobbied by Mosaic. The company also hosted and paid nearly \$25,000 for a fundraising event for the state lawmaker who sponsored the bill, Rep. Lawrence McClure, R-Plant City.

This April, the transportation department released its long-anticipated review of the existing science on whether it's possible to use

phosphogypsum in Florida roads.

The report, obtained by the Tampa Bay Times through a public records request, said past studies showed the [waste product](#) could "meet FDOT standards," but using it does face challenges. The report also concludes not much test data exists for phosphogypsum compared to other materials used in construction.

"Further study through laboratory tests and full-scale field tests should address the gaps," the department wrote in its 178-page report. A spokesperson for the department on Wednesday reiterated to the Tampa Bay Times that more research is needed.

Xianming Shi, a professor and chairperson of Washington State University's civil and environmental engineering department, said there are both benefits and risks when companies like Mosaic attempt to reuse their byproducts. Shi reviewed a copy of the state's report, which the Times provided.

In this case, benefits of using phosphogypsum include reducing the environmental impacts of traditional road ingredients, like lime and cement, and it could cut back on the amount of material ending up in a landfill, Shi said.

As for the risks? "There are quite a few," Shi said. For one: If it isn't treated, gypsum is sensitive to moisture.

"When you have a road base in Florida with heavy rain, there may be some significant risk if this moisture sensitivity is not mitigated," Shi said in an interview. The phosphogypsum could leach heavy metals out of roads over time, which could seep into soil and groundwater. The studies reviewed by the Florida Department of Transportation had little mention of the long-term ecological consequences or how to manage

leaching risks, Shi noted.

If the feds approved a [pilot project](#), there would need to be protocols in place to ensure the quality of phosphogypsum and protect environmental and human health, Shi said.

"Just because they're reusing waste doesn't make that project all of a sudden a 'green' project," Shi said. "You have to look at the life cycle and whether this project is truly 'green.'"

While the waste may be a "misplaced resource," the benefits of using it, if not properly managed, could have unintended consequences, Shi said.

Once the Environmental Protection Agency's review is done, the agency will either approve or deny the proposal and open a public comment period about the decision, officials noted in their recent letter to Mosaic.

Critics of the proposal, including the nonprofit Center for Biological Diversity, worry about the radiological risks to [road construction](#) workers and potential environmental harm. In September, at least 30 lawmakers urged federal environmental regulators to deny Mosaic's request because of the potential human and environmental health issues.

"Alternative uses of phosphogypsum must be at least as protective of public health as placement in gypstack systems, and to date, no applications have met this standard," Ragan Whitlock, an attorney for the Center for Biological Diversity, wrote in a statement to the Times.

"The phosphate industry's desire to make money off its toxic, radioactive waste changes nothing," he said.

In a statement, Mosaic spokesperson Jackie Barron reiterated that reusing phosphogypsum is not a money-making endeavor for the

company.

"For those who claim otherwise, it's just low-hanging fruit as they try to stir fear and raise funds for themselves in the process," Barron wrote in an email. The focus of the project is to catch up with other countries around the world that are reusing the phosphate byproduct, Barron said.

Whitlock and his nonprofit claim that it's misleading when the phosphate industry points to other countries reusing phosphogypsum.

"Another nation's willingness to expose its citizens to corporate pollution is not a justification for the United States to disregard the well-known health and environmental consequences," Whitlock said.

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