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Several options on the table for Superfund site cleanup

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The U.S. Environmental Protection Agency has narrowed down its options for how to address mercury contamination at one of Glynn County's four nationally designated hazardous waste sites, and the public will soon have the chance to weigh in on how the cleanup moves forward.

A portion of the LCP Chemicals site with high levels of mercury is the focus of a recently released report that details several alternatives for cleanup at the site, a Superfund site off of Ross Road just north of Brunswick and adjacent to the current Glynn County Detention Center.

The LCP Chemicals site is more than 800 acres, and cleanup efforts there have been separated into sections called "operable units," the focuses of which include marsh cleanup, groundwater and soil.



The EPA hosted a meeting in November 2023 in Brunswick to discuss its options for operable unit two, where mercury is the greatest concern.

"Within operable unit two, the EPA is phasing the cleanup, so they want to address the cell building area first because primarily that is the source area for the majority of the mercury," said Rachael Thompson, executive director of the Glynn Environmental Coalition. "So if you're looking at the site and if you were doing soil sampling of the site, this cell building area is where they have actually found elementary mercury."

Pea-sized globules of mercury are found in the soil core there. This is a highly contaminated area, and toxicity is of significant concern, Thompson said.

The EPA plans over the next 12 to 15 months to work through the process of selecting an alternative to clean up this area. It'll be seeking comments from the public during this time, a comment period that has not yet been announced.

Once a decision is finalized, work will begin.

This is part of a long process for site-wide cleanup at a Superfund site that closed in 1994. Progress may feel frustratingly slow, Thompson said, but the work is moving forward.

One option is a process called sequestration, which would transform the mercury so that it will not infiltrate the groundwater or soil.

"You're taking the mercury and you're turning it into something that is safe," Thompson said. "And you can do that two ways. One way is chemical sequestration."

Thompson offered an analogy to explain this process. The globs of mercury would be like peanuts that are then coated in chocolate like a peanut M&M.

"It's a chemical that's going on the outside, but it makes it so that nothing can penetrate that coating," she explained. "So once the chemical finds the mercury, it coats the mercury and then the mercury is basically secure."

The process would require a series of injections of the proposed chemical. Testing would be required first because it has not been done at such a large scale before, Thompson said.

"There's a lot of unknowns about it as well," she said. "But they do believe that it's a good option to consider moving forward."



Another option is biological sequestering, through which bacteria rather than a chemical would be injected in the ground.

“Essentially you’ve got the biological sequestering and the chemical sequestering, and either one of those two will make it so that the mercury is no longer suspended in the groundwater or suspended in the sediment and it doesn’t present a risk to human health anymore,” Thompson said.

The final option is an engineered remedy called a “flurry wall,” through which a cement curtain is built around the area. It would require drilling into the ground to the clay and ensuring no water can go in or out.

“It’s kind of like a big bathtub underground,” Thompson said.

Complete removal of the mercury isn’t an option.

The chemicals released in this area have dissolved into the sediment and clay beneath the ground, causing the cell building to sink. To address this, cement and medial reinforcements were put in the ground along with an engineered cap. Around three feet of soil were then placed on top.

“So if you went out there right now it would just look like a grassy field, but there’s all this stuff beneath the ground,” Thompson said.

This complicates any consideration of digging up and removing the contamination from the site, Thompson said.

“They can’t really do that here because it’s not just digging up dirt,” she said. “You basically would be chiseling into the ground and pulling these steel beams out of the ground. So it’s not really an option”

The EPA may choose to do a combination of actions, she added. In the next six to eight months, the agency is expected to release the proposed plan. At that time, there will be a public comment period.

“The public can either say, ‘We don’t like that alternative and want to do something else, or ‘We like this alternative but we want you to add this,’” Thompson said. “Or they could say it’s perfect.”

GEC is in favor of the alternatives that have been presented, Thompson said.

“There’s still a lot of unknowns because of the limited amount of real world experience that these alternatives have,” she said. “We’re optimistic about both options, but we still have a level of concern just because of those unknowns.”

While this is just another step in a long, slow process, Thompson is optimistic that cleanup plans are progressing.

“I think it can be really frustrating for people because of how long it takes, and I would say if anything that I’m most optimistic about it is just the simple fact that progress is getting made,” she said. “For a lot of people, it’s been 30 years since the site was designated and this problem has been a part of our community for so long. And they’re only focusing on this little itty bitty section of the site, and of course we can always ask for them to do more and to work faster, but I am optimistic that work is being done and progress is being made because we’re had a lot of years with none of that.”



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