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Cleanup continues at LCP site

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A slurry of sand and water spews from a nozzle mounted on a small excavator in the marsh at the former LCP Chemicals Georgia site. Terry Dickson/The Brunswick News

Come the end of October, there will be only one major cleanup left at LCP Chemicals Georgia, the sprawling former industrial site that an EPA official once termed the poster child of Superfund sites.

The 800-acre site, most of it marsh, was declared a Superfund site in 1994 after the state Environmental Protection Division ordered it closed over continuing contamination of the 123 acres of uplands and adjoining creeks and marsh.

The work was laid out in three operable units, or OU's. OU-3 is complete, the cleanup of the former plant grounds including the dismantling of former production buildings and the excavation, treatment and removal of soils contaminated primarily with mercury, PCBs and lead.



Once the current work within 670 acres of marsh and creeks, or OU-1, is done in the coming months, all that will be left is perhaps the hardest. Honeywell must find a government-approved way to remove and treat a plume of caustic brine in the ground beneath where the production buildings stood. The groundwater in that plume is heavily contaminated with mercury and PCBs.

Since November, environmental contractors have dredged sediment from about 11 acres of contaminated creek bottoms to a depth of 18 inches and backfilled it with a foot of clean sand. In the 11 acres of marsh, which has actionable levels of mercury and PCBs, the contractors are placing a uniform 6-inch lawyer of sand. The “thin layer cover,” as it is called, prevents erosion while providing a new marsh surface that protects wildlife such as wood storks, roseate spoonbills and egrets from coming in contact with the contaminants as they wade and feed.

Benny Dehghi, Honeywell vice president of Global Remediation and Site Redevelopment, visited the site this week and said the company is proud of what has been accomplished.

An excavator on a barge is placing the sand in the creeks and a canal that parallels the south side of a causeway that extends west from LCP to Purvis Creek. The contractor uses GPS to ensure the backfill is evenly placed at the proper thickness.

A marine survey crew floats close by taking measurements to ensure the work is complete in a particular area before the barge moves.

The dredging is 97 percent complete, and the backfill is about half done.

The thin cover layer is applied in a more novel method. A small excavator is equipped with a big nozzle that sends an arc of saltwater and sand into the air to rain down on the marsh. It provides the cover that is required in the remedy that comes with a couple of advantages.

First, the spray can reach 100 feet away from the backhoe, limiting the number of polyethylene mats placed over the marsh to move and support the heavy equipment. Secondly, the buried marsh grasses eventually grow up through the sand and again cover the marsh in vegetation.

The method had been used previously in a number of U.S. Army Corps of Engineers projects to restore eroded shorelines. Although Honeywell's engineers believed it would work to remediate the marsh, the company had to demonstrate it first, Dehghi said.

Starting in 2018, Honeywell's contractors conducted a three-year pilot project in a small section of marsh in which it applied two covers, sand trucked from a quarry in Wayne County and a finer grained material. The sand proved best for marsh grass recovery.

The EPA approved the remedy and a representative visits the site daily to monitor the work, Honeywell said.

Indeed, photos taken over time show the rate of recovery beginning with what appears to be almost like a beach immediately after application to a lush, green marsh three years later. A section of marsh in the northeast corner of the grounds that was covered in March shows how quickly the natural grasses return. Clumps of marsh grass already are growing, sparse in some areas, thick in others. Fiddler crabs have also returned and can be seen scurrying in large numbers during low tide.

About half of the 11 acres of marsh have been covered and the entire project should be complete by the end of October, Honeywell said.



It has all come with a cost to Honeywell since it merged with AlliedSignal in 1999. The new corporation is now known as Honeywell. AlliedSignal was already working at the Superfund site because it was the former owner of the site before selling to the Hanlin Group in the 1970s. Bankrupt, Hanlin Group had no assets to apply to the cleanup so AlliedSignal, which had built the original chlor-alkali plant, returned as one of three “principally responsible parties.”

The two other parties funding smaller portions of the cleanup were Georgia Power Co., which once had a generating facility there, and ARCO, which operated a refinery on the property a century ago.

Honeywell has shouldered the largest share of the cleanup.

“To date we have spent roughly \$100 million,” Dehghi said.

The current project will cost about \$26 million, he said. That cost included fusing a half mile of pipe to pump water from Purvis Creek that is mixed with sand to apply the cover. It also extended electrical lines 1,000 feet, removed old timber pilings and built a temporary sheet pile containment dam across the confluence of East Creek and Purvis Creek to hold back water during the falling tides. That keeps the water deep enough to float the barges. Otherwise, the muddy bottoms would be exposed at low tide and the barges would be periodically immobilized.

The containment structure also controls turbidity from the previous dredging and the ongoing work in the creek bottoms.

That leaves what could be the most ambitious remedy, removing the brine pool from beneath the grounds where the three salmon-colored production buildings stood. The EPA said in the past the cells leaked almost constantly and the caustic brine laden with mercury ate its way through the ground and foundations and formed a large subterranean pool.

In the 1990s, EPA response crews said the highly toxic brine had dissolved the underground minerals and encapsulated itself inside the resulting crust. The EPA ultimately learned, however, the contaminated solution posed a risk of going deeper into freshwater aquifers. The company and other responsible parties are working with the EPA and the Georgia Environmental Protection Division to complete the remedial investigation and a feasibility study on removing and treating it.

Not all of Honeywell’s expenditures have gone to cleanup. The company has funded the Pride in Glynn County Seafood Cookbooks of recipes provided by local cooks and is helping fund an after school program for those 4 to 18 called Coastal Outreach Soccer. The students are, among other things, taking hands-on lessons from marine specialists at the UGA Marine Extension office on Bay Street.

The program is designed to demonstrate a range of career opportunities in Glynn County and surrounding areas while encouraging them to be good stewards of the environment. In addition to science education, they track animal movements, study the impact of stormwater runoff and catch some blue crabs.

Honeywell supported Coastal Outreach Soccer's construction of a futsal court at Perry Park and joined Glynn County and Brunswick in the conversion of an unused baseball field on Wylly Avenue into Paulk Field for soccer.

Part of Dehghi's job is to redevelop sites. Part of that has already happened at LCP where Glynn County built its most recent jail and Sheriff's Office facilities on the 31 acres that were cleaned up early on in the process.

Areas of the former industrial site have been kept clear for roads, parking areas and to accommodate the big de-watering and treatment facilities to cleanse and remove the sediments dredged from Purvis and the other creeks. Otherwise, much of the former plant grounds are shaded by pines, myrtles and other trees that have grown up on what were once closely mown areas.

Honeywell said the uplands not occupied by the Sheriff's Office "has the potential for a variety of uses."

Officials have said in the past that it is highly unlikely a chemical industry will be among the possible uses.



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