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Crane Engineering awarded \$4.2 million grant to develop Mobile Septage Treatment System

Compiled by Brian Roebke Editor

Crane Engineering of Kimberly was awarded a \$4.2 million grant by the Bill & Melinda Gates Foundation to advance development of the Mobile Septage Treatment System — a new sanitation technology that processes human fecal sludge into non-potable water for agricultural or industrial use. The goal of the project is to create a pathogen-killing human waste treatment system that is viable in areas such as dense urban settlements, where poor sanitation poses the greatest risks to human health.

Mark Hassman, project manager for this project for Crane Engineering, said the company built a prototype in 2016, tested it in 2017, and then was awarded a grant

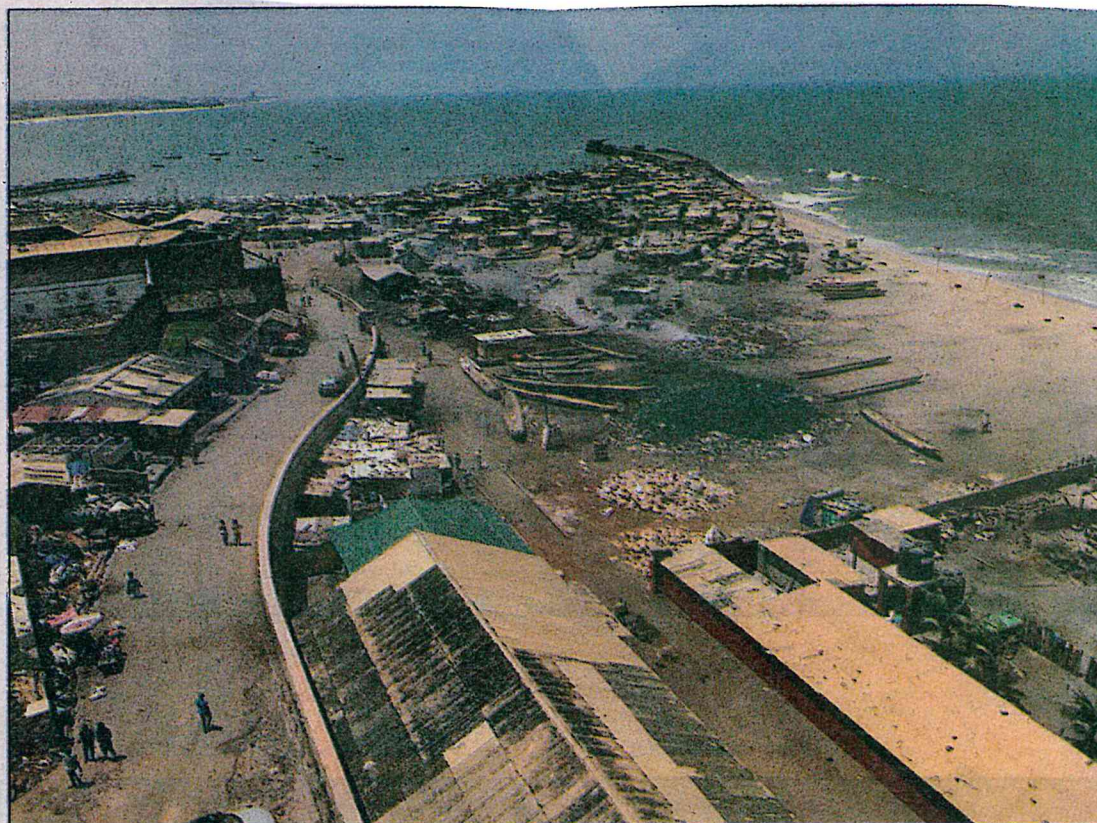
to further its development to meet the need to treat sludge in some developing countries.

“It’s a huge need,” he said. According to the World Health Organization UNICEF JMP reports, 4.5 billion people lack safely managed sanitation services. They estimate that every year, 361,000 children under five years of age die due to diarrhea caused by poor sanitation and contaminated water.

“It’s an opportunity for us to develop technology that can help a lot of people,” Hassman said.

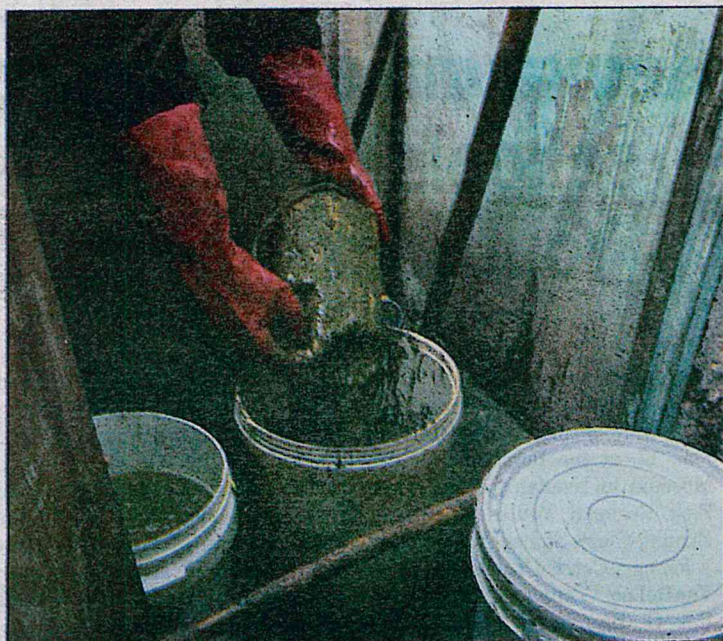
The idea has been part of the Bill & Melinda Gates Foundation for a long time, with a lot of people working different facets of it.

“This is just one niche of a long supply chain that has to materialize for this crisis to be solved,” Hassman



Submitted photos

Crane Engineering representatives traveled to Uganda and Ghana, Africa last year to see up close the conditions people are living in, where they are in close quarters without any water or sanitation systems.



People currently empty latrines with their hands where sewage systems are not available.

said.

The new grant allows Crane Engineering to continue developing the prototype, making it more cost effective, transportable, and easier to maneuver in crowded informal settlements.

“We immediately recognized the greater purpose at work here, using our wastewater and custom fluid system know-how to potentially save lives across the world,” said Lance Crane, owner and CEO of Crane Engineering. “That mission really captivated all of us.”

The intent is for Crane to improve the technology and then mass produce the unit for use in those countries.

“We will be testing several of these units in Africa, India, maybe

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This photo shows “before” and “after” water is treated by the Crane Engineering Mobile Septage Treatment System, a new sanitation technology that processes human fecal sludge into non-potable water for agricultural or industrial use.



Ditches in the cities are filled with sludge.

Submitted photo

Crane

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even China, and once we can prove the technology works, that would be the intent," Hassman said.

The foundation sent four Crane employees to Ghana and Uganda last summer to see the problem firsthand.

"They took us into these settlements and the slang word would be swamps," Hassman said. "They're very dense and they don't have the infrastructure we're used to." There aren't even simple sewer and water systems, with human waste running through the streets. "The sanitation crisis is huge in those areas," Hassmen said. "The intent is to go into these places like that and treat the septage so that it's not harmful to the people living there in those settlements.

He is grateful for a lot of resources in the area this project, noting the Heart of the Valley Metropolitan Sewage District was invaluable to supply raw materials and test on their treatment plant.

"They've just been awesome. I just can't thank them enough," Hassman said. "Without them, we wouldn't be able to do this.