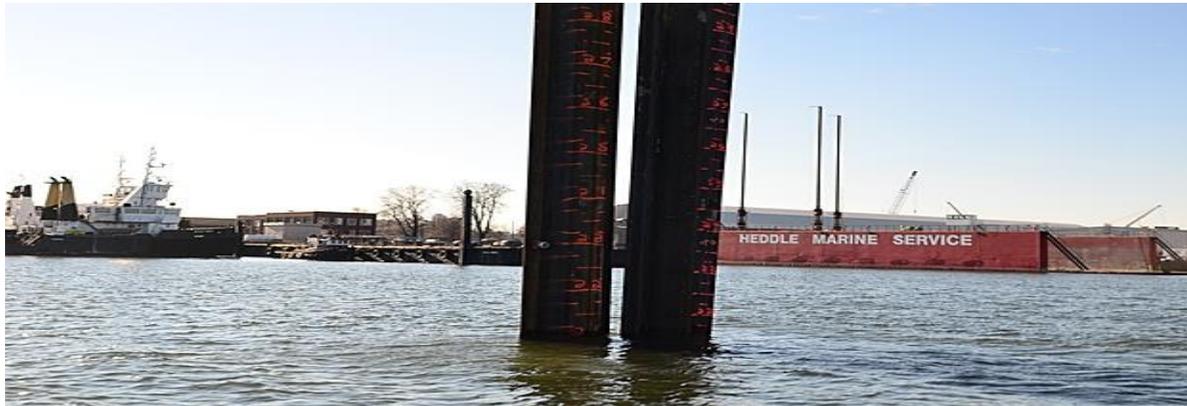


Plan for Hamilton's Randle Reef cleanup: Put coal tar 'in a big steel box'

McMaster engineering professor says 'a lot of thought has gone into it'

By Samantha Craggs , [CBC News](#) Posted: Dec 19, 2012 7:23 AM ET Last Updated: Dec 21, 2012 10:01 AM ET



Crews have started a test project as a prelude to building a containment facility for Randle Reef. Containment facilities are common in areas such as landfill sites, but less common underwater, experts say. (Environment Canada)

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The notion of putting a lid on a mass of coal tar contamination may sound odd, but it's actually a common method for remediating these situations, says the project manager of Randle Reef.

Jonathan Gee, manager of the Great Lakes Areas of Concern division of Environment Canada, said the plan to encase the worst part of the contamination in steel has worked in numerous other places.

"This is not a brand new creation," he said. "This is pretty well established."

The project will see the highest concentration of coal tar — about 130,000 cubic metres — put into "a big steel box," Gee said. The surrounding contamination — some 500,000 cubic metres — will be dredged into the containment facility, he said.

"It's really pretty simple," he said of the facility, which has a 200-year lifespan. "Conceptually, you build a big steel box. You fill the big steel box. Then you put a lid on the box and turn it over to an organization that will use it as a port facility and maintain it in perpetuity."

Gee spoke with CBC Hamilton Tuesday morning when federal environment minister Peter Kent announced [Ottawa's share](#) of the \$138.9-million project. The clean up is a joint commitment between the federal and provincial governments, the Hamilton Port Authority, the cities of Hamilton and Burlington and the Halton Region.



Environment Minister Peter Kent announces \$46.3 million for Randle Reef. (Samantha Craggs/CBC)

U.S. Steel is also contributing 10,000 tonnes of hot rolled steel sheet and another 700 tonnes of steel products to build the containment facility.

Environment Canada has taken the best practices from several other projects to come up with the Randle Reef solution, Gee said. The containment facility concept is being used on a project in Tacoma, Wash. Arcelor-Mittal Dofasco in Hamilton is examining a similar project, he said.

Dieter Stolle, a professor at McMaster University's civil engineering department, concurs that the Randle Reef project is nothing radical.

"It's taking bits and pieces from all over the place and putting them together to solve a specific problem," he said. "A lot of thought has gone into it."

The capping mechanism is commonly used at landfill sites, he said. It's less common to see it done in water. The biggest challenge will be to avoid more problems by disturbing and spreading the sediment.

Construction in 2014

"The big issue here is to minimize disturbing the sediments so new contaminants aren't released into the water," he said.

Environment Canada and the Hamilton Port Authority [launched a test project](#) on Dec. 10 to look at issues such as disturbing the sediment. Steel sheets will be hammered into the lakebed at a depth of 24 metres. The result will help engineers determine how much force is required to drive piles at the site.

There are always potential risks with these projects, Kent said. But the federal government, in doing an environmental assessment of the project, will "look to make sure sediment isn't stirred up and there aren't collateral negative impacts," he said.

It'll likely be 2014 before construction is in full swing on the Randle Reef containment facility, Kent said. The environmental assessment will likely happen in 2013, and the length of those can vary.

"I would think it would take much of 2013 to put everything in place with a real construction rollout in 2014."