

## Cleanup to start at Port Granby Project site



The cleanup of historic low-level radioactive waste and its relocation to the Port Granby Project engineered aboveground mound is scheduled to begin this fall.

Since the general contractor, AMEC-CB&I Joint Venture, began bringing in equipment, materials and construction crews this past spring, the site of the Port Granby Project in southeast Clarington has been the centre of significant activity. Over 14,000 truckloads of clay, specially manufactured materials, gravel and sand have been delivered to the site along the project's designated clean construction material transportation route. The facility's two engineered storage cells and internal roadways have been built.

The work has included the completion of the internal waste haul route and Lakeshore Road underpass along which trucks will transport the waste from the existing site on the shoreline of Lake Ontario to the long-

term waste management facility, 700 metres to the north.

"Everything is now in place for our contractor to start excavating and transferring the waste away from the lake into safe, long-term storage," said Mark Galanter, Port Hope Area Initiative (PHAI) Port Granby Project Manager. "After years of working with the community and government stakeholders to bring this important project to fruition, the cleanup is ready to begin."

Ensuring the environment is protected is a key priority, so preparations have included measures to carefully monitor the waste trucks – all of which will be covered – even though they will not travel on public roadways.

### *Safety comes first*

Each morning before starting work at the Port Granby Project construction site, every AMEC-CB&I worker fills out a Task Analysis Card, listing the hazards of the job and how they'll do the work safely.

Also on site, PHAI and contractor supervisors kick off the workday with a tailgate meeting to review scheduled tasks and environmental conditions that could impact the job, from heat to wind predictions.

*continued on pg. 2...*

*continued on pg. 5...*

### *In this issue...*

High-quality clay sourced locally . . . . .	2
Building the engineered mound . . . . .	3
Underpass construction . . . . .	4
Generating business opportunities . . . . .	5
Citizen Liaison Group recruitment . . . . .	6





## Local clay source provides environmental protection and economic benefits

The PHAI contractor for the Port Granby Project did not have to go far to find high-quality clay to line the cells of the engineered aboveground mound. Sourcing clay that would meet the project's rigorous standards for environmental protection had been identified as a potential challenge, but soon after AMEC-CB&I Joint Venture began its search, it found St Marys Cement in Bowmanville, located just west of the Port Granby Project site.

St Marys Cement's ability to supply the quantity and quality of clay needed for the project is both an environmental and an economic benefit for the area. The clay liner is critical to the mound's performance, as it works with other components to encase the waste within the mound and prevent contaminated water from entering the ground. Testing by the contractor, which has been observed by the Canadian Nuclear Safety Commission, confirmed the clay exceeds the stringent requirements of the project's Canadian Nuclear Safety Commission licence. St Marys Cement will also supply the clay required for construction of the first cell of the Port Hope Project engineered aboveground mound.

## Building the Port Granby Project engineered aboveground mound

The highly engineered aboveground mound at the Port Granby Project long-term waste management facility will isolate the waste by encasing it within multi-layer base liner and cover systems.

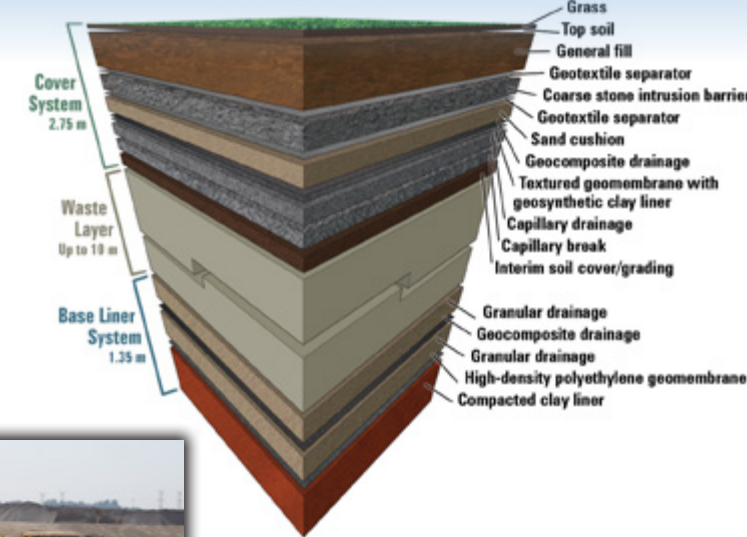
Completion of the mound's two cells and base liner system this past summer is enabling the excavation of historic low-level radioactive waste at the existing site to begin.

Approximately 450,000 cubic metres of historic low-level radioactive waste will be transported from the

existing site and placed into the new facility, where it will be progressively covered and encapsulated in the engineered mound.

The mound is situated on a 10-hectare site and will rise to a height of about eight metres. The approximately three-metre thick cover system will be constructed once all of the waste has been placed in the cells.

The mound's performance will be closely monitored during construction and for hundreds of years into the future to ensure its safety.



### Cell construction

Construction crews excavate to a depth of approximately eight metres below the surface to reach low-permeability natural till that underlies the cells. Clean soil from the area where the cells are constructed is removed and stockpiled on site; the stockpiled soil will be used for the mound's cover system and to restore the existing waste management facility site (south of Lakeshore Road) after the waste has been removed.

#### Safety... continued from pg. 1

The cards and meetings are just two examples of the PHAI's and contractor's commitment to safety and environmental protection on this highly regulated project.

"Making sure every worker goes home at night to their families in the same condition they came to work is what safety is all about," says AMEC-CB&I Health and Safety Officer, Derek Nicol. "We never stop training, reinforcing the importance of safety and measuring how we're doing."



### Compacted clay liner

The clay shown above is placed on top of the natural till in five individual layers and compacted (machine in photo) to a total thickness of 0.75 metres. The compaction of the layer is tested for density and moisture using prescribed methods. The compacted clay is a key component of the composite liner system that forms an impermeable barrier at the base of the mound and keeps contaminated water from entering the environment. Inset: Water trucks add moisture to the clay for compacting.



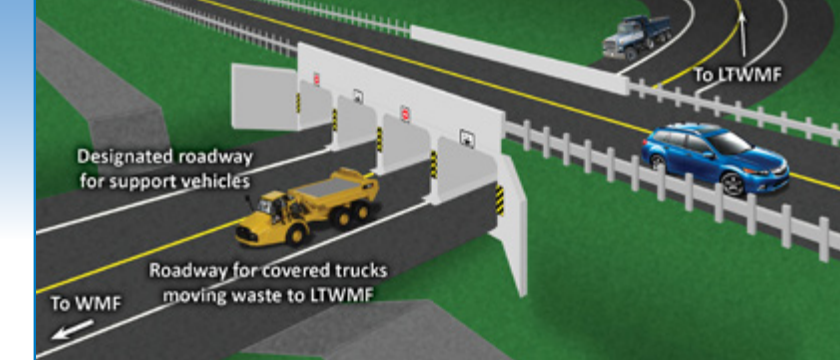
### Leachate collection system

A drainage ditch (circled above) is covered with the high-density polyethylene geomembrane and filled with coarse gravel. This forms the leachate collection system that carries contaminated water out of the mound. The leachate is collected and pumped to the on-site waste water treatment plant.



### High-density polyethylene geomembrane

This manufactured layer is placed over the clay as another key component of the mound's composite base liner system. The material is laid in sheets, and the seams are precision welded to form a continuous barrier over the surface of the clay.



## Underpass, internal haul route keep waste trucks off public roads

Historic low-level radioactive waste transported from the existing Port Granby Waste Management Facility (WMF) to the engineered aboveground mound, north of Lakeshore Road, will travel along an internal waste haul road and through a temporary underpass at the new long-term waste management facility (LTWMF). Lakeshore Road traffic will be diverted over the underpass while the project is underway. The construction of the internal waste haul road and underpass fulfill a commitment made to the community during the environmental assessment that no waste would travel on public roadways.



Delivery and installation of these pre-cast box culverts for the underpass was completed during the summer.