

Eglinton Case Study

MF006

Tunnelling under a dense urban environment comes with several challenges, including heavy traffic, waste disposal issues and costly logistics.

THE SITUATION

Construction companies Aecon and Dragados, and engineering firm Ghella were part of the consortium awarded the Eglinton Crosstown East Tunnel contract by Metrolinx—a 9.2-km extension of the Eglinton Crosstown Light Rail Transit in Toronto, Ontario. The project encompassed the completion of two parallel 6.5-metre diameter tunnels.

THE PROBLEM

Massive Amounts Of Unstable Wet Spoils

A tunnelling project of this magnitude produces an immense and steady stream of wet spoils, the sheer volume of which presents multiple transport, storage and disposal problems. A safe and efficient solution for handling over 100,000 tons of mud spoils was needed.

THE SOLUTION

Once we completed our site testing with one of our distributors—Di-Corp—we learned that the solidification product currently used required significantly more product – at a greater cost – to achieve an acceptable result.

The previous product required a dosage of approximately 0.7%—more than triple the amount of MetaFLO reagent required (0.2% by weight of mud).

Our solidification reagent MF006—which is well-suited for the solidification of water-based semi-solids such as tunnel muck, directional drill cuttings, hydro-excavation material, mining waste, municipal waste and stormwater lagoons—was used to facilitate cheaper and faster waste disposal.

THE RESULTS

54%

reduction in the number of trucks needed

63%

reduction in greenhouse gas emissions

HOW WE DID IT

Throughout the Eglinton Crosstown West Extension, MetaFLO worked closely with the construction team to fine-tune the reagent dosage and application methodology used on the project to meet the needs of changing ground conditions. Shale, sandy shale, and clay with alluvial material with varying moisture content often require dosage adjustments to optimize reagent consumption.

Traditionally, the slurry is treated on the surface, where it emerges on conveyors and is discharged into muck pits or cells. MetaFLO worked with the construction team to introduce our reagent in situ during the muck conveyance process.

By introducing the dosing of the slurry as it travels to the muck containment cells, the slurry began the solidification process immediately, requiring minimal finishing reagent on the surface. The existing cross-conveyor system, which moves the slurry to the surface, then leveraged each directional change as a point of slurry agitation, further accelerating solidification. Changing the original treatment plan and allowing the mechanical action of the cross conveyors to do the work saved significant time and money.

 1-888-862-4011

 info@metaflotech.com

 www.metaflotech.com

The success of this massive infrastructure project is just one of the many examples of how MetaFLO can help tackle other large-scale transit and infrastructure projects globally.

Contact us for tailor-made waste disposal solutions.

METAFLO
technologies™