



Pownal Tannery Superfund Site

Project Description

The U.S. EPA's Pownal Tannery Superfund Site in North Pownal, Vermont, required the environmentally safe and structurally sound disposal of 55,000 cubic yards of sludge, contaminated with oils, solvents, lead and chromium. The sludge had been generated by tanning operations between 1937 and 1988, whereby raw discharges were poured into waste lagoons abutting the Hoosic River in Vermont.

Metcalf & Eddy (M&E) managed the \$8.4 million cleanup project (originally budgeted by the U.S. EPA at \$9.6 million), with Maxymillian Technologies conducting the remediation and construction activities. M&E's plans called for the dense, but structurally weak, sludge to be stabilized and compacted into a consolidation landfill, the surface of which was to be used for recreation facilities for the Town of North Pownal.

GeoTesting Express' Role

M&E's approach called for stabilizing the sludge in-place, followed by excavation and then compaction into the landfill. Maxymillian Technologies was required to conduct a "shake-down" demonstration of their stabilization method to determine the final stabilization mix design. This work consisted of preparing, testing and evaluating sludge mixes containing varying percentages of Portland ce-

ment and lime contents. Maxymillian hired GeoTesting Express (GTX) to conduct the "shake-down" testing, as well as to conduct quality control testing throughout the project. "Shake-down" testing had to be completed within one week in order to ensure that the landfill would be constructed on schedule.

Sludge properties and required construction operations prevented representative samples from being taken using standard sampling techniques. Subsequently, unconfined compressive strengths measured in the laboratory were frequently below the strength criteria. GTX proposed a modified (laboratory-measured) unconfined compressive strength requirement, as well as alternative test methods, the results of which would more accurately correlate to the true in-field strengths. GTX's testing and engineering services totaled over \$27,000.

Benefits to Client

GeoTesting Express' engineering support and quickness in providing solutions to critical challenges allowed Maxymillian Technologies and Metcalf & Eddy to move the Pownal Tannery Superfund project forward, on schedule and under budget. GTX

(Continued on page 2)

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(Continued from page 1)

conducted the initial “shake-down” testing within the time frame required. And, when properties of the in-place stabilized sludge prevented accurate measurement of actual strengths, GTX immediately proposed workable solutions. Through its unparalleled engineering support and responsive testing services, GeoTesting Express significantly assisted Maxymillian Technologies and Metcalf & Eddy in creating a viable asset out of what was a public eyesore in the town of North Pownal, Vermont.

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