

# CHERRY ISLAND LANDFILL GEO TECH INSTALLATIONS



The Delaware Solid Waste Authority (DSWA) Cherry Island Landfill is located at the intersection of the Delaware and Christina Rivers just outside of Wilmington, Delaware. The “Island” was first constructed by placing dredge spoils from the Delaware River on the site. These dredge spoils were placed on native river deposits of sand, clay, and silt. In order to expand the waste disposal capacity of the existing landfill, DSWA designed and constructed one of the largest mechanically stabilized earthen (MSE) wall projects in the United States.

Brickhouse Environmental was hired by the general contractor, Severson of Buffalo NY, to install a vast array of geotechnical monitoring equipment needed to assess the long term performance of the MSE wall. This was a massive project requiring the careful coordination with the General Contractor, Site Engineer, Construction Company, Electricians, Drillers, Surveyors, Excavators, and the thousands of dump trucks importing fill for the wall construction. All this had to take place without interrupting the ongoing landfilling of Delaware’s municipal waste.

Hundreds of pieces of monitoring equipment, including wells, vibrating wire piezometers, settlement sensors and inclinometers were installed by Brickhouse Environmental’s Delaware licensed geologists and geoscientists. Over 64,000 feet of armored data cable (the same cable installed to carry internet traffic under the Pacific Ocean) was trenched and networked to each of the instrument clusters and routed back to read out boxes. This extensive network of instruments measures dredge spoil consolidation and the stability of the landfill.

The project has been very successful for DSWA. The new monitoring well network and instrument clusters continuously provide data for future monitoring of the MSE Wall performance. All project work was conducted on schedule with minimal interference to the landfill’s day to day activities.



**BRICKHOUSE ENVIRONMENTAL**  
515 SOUTH FRANKLIN STREET  
WEST CHESTER, PA 19382  
610.692.5770  
[www.brickhouse-environmental.com](http://www.brickhouse-environmental.com)