



CASE STUDY: ARMORLINER 24

NEW EARTH SOILS & COMPOST, SAN ANTONIO, TEXAS

The Background



New Earth Soils & Compost is a family-owned business based in San Antonio, TX. Their Houston compost facility accepts dated fruits and vegetables from big box supermarkets and wood waste from tree and shrub trimming operations. The materials are then mulched into composts of varying coarseness.

In the fall of 2011, New Earth began contracting with several municipalities in the Houston area to accept the biomass solids generated from multiple wastewater treatment plants. When accepted, the solids are largely sanitary but require additional processing to ensure that all pathogens are removed prior to conversion to a compost.

The biomass must be combined with a carbon source and a nitrogen source to be converted to a compost. New Earth uses the fruit and vegetable matter as the nitrogen source and the tree and shrub mass as the carbon source.

The mixture must be maintained at 160°F. It is windrowed and turned periodically with a special, self-propelled machine acquired by New Earth.

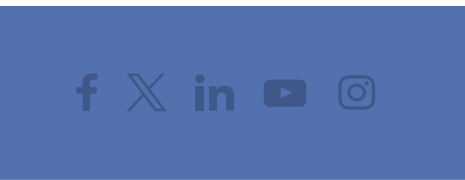


Unwanted debris

The Challenge

With the addition of biomass to the product mix at New Earth, the Texas Commission on Environmental Quality (TCEQ) required that the ground beneath the processing area be lined with a geomembrane. The TCEQ also required that a site-water storage detention pond be lined. New Earth had retained Camp, Dresser, McKee (CDM) to provide site design services. CDM elected to use a woven coated geomembrane because of the cost-benefit ratio and the ease and speed with which fabricated geomembranes can be installed.

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Fabricated panels being unrolled



ArmorLiner panels easily deployed

The Solution

The contractor, LDF Construction, Inc., turned to Wright Lining Inc. Steve and Alan Wright have been installing geomembranes for over 32 years. Donald at LDF Construction, Inc. knew he could count on them for a speedy installation. Steve Wright contacted Stan Slifer with Watersaver Co., Inc. in Denver, CO for guidance on cost and fabrication of a woven, coated geomembrane. Watersaver has fabricated over two billion square feet of geomembranes and was able to provide a quick turnaround with information and material.

Watersaver recommended Intertape Polymer Group's (IPG®) 24 mil, polyethylene AquaMaster® product. Because ArmorLiner 24 is a light, high performance fabric it can be fabricated into large panels. In this case, Watersaver fabricated several large-sized panels; most measuring nearly 1 acre in size (192' x 200' or 38,400 sf).

Watersaver was able to fabricate and ship finished panels within a week of the order, which met the owner's and contractor's short timeline. Tim Toohey, Watersaver's Production Operations Manager, described the welding performance of the ArmorLiner 24 as "Beautiful."

With the arrival of the panels on pallets, Wright Lining went straight to work deploying material.

LDF Construction, Inc. had spent the week preparing the pond and the pad for deploying the liner. This meant fine grading and ensuring that there were no objects larger than a fist exposed in the soil. Items like the stick and the rock shown on the previous page had to be removed. Once the pond and pad were inspected and approved the liner was deployed.

Timing was critical, in this case, because the site was hit with a severe thunderstorm immediately after the panels were laid. Donald Robson, LDF Construction, Inc., expressed his gratitude at the ability of Wright Lining, using ArmorLiner 24, to deploy 130,000 square feet in under four hours! The pallets were positioned according to plan. The panels were then pulled out using local labor. The ArmorLiner 24 was welded using Leister Twinny T hot-air welders.

Steve Wright typically works with thicker mil reinforced geomembranes. He was initially concerned that the 24 mil ArmorLiner 24 would be too light for this project. He found that the material welded extremely well and that the liner was "tough as nails!" Steve says he's looking forward to working with the product again in the future. He said he particularly likes the fact that the ArmorLiner 24 seaming process is quicker than that of other geomembrane options. With their project completed on time and within budget with ArmorLiner 24, Rob Smith, General Manager at New Earth, concluded: "Oh man — that stuff's awesome!"



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