



# AQUAMASTER® GEOMEMBRANES

Case Study

## New Earth Facility Accepts Bio-Solids

### New Earth Soils & Compost

New Earth is a family-owned business based in San Antonio, TX that has been operating for almost 14 years. The Houston compost facility was purchased 4 years ago. The 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 a number of 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 and then to convert the material to a compost.

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



New Earth facility

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

### 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 created and 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 to benefit ratio and the ease and speed with which fabricated geomembranes can be installed.



Steve and Alan Wright

### 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 professional and 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 turn around with information and material.

Watersaver recommended Intertape Polymer Group's 24 mil, polyethylene (PE) AquaMaster® (AM) product. Because AquaMaster 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'x200' or 38,400 sf).



Large Panel: .88 Acres

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

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



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Unwanted Debris

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 in this picture 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, of LDF Construction, Inc., expressed his gratitude at the ability of Wright Lining, using AquaMaster®, 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 AquaMaster® 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 AquaMaster® 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 AM 24 seaming process is quicker than that of other geomembrane options. With their project completed on time and within budget with AquaMaster®, Rob Smith, the general manager at New Earth, concluded: “Oh man — that stuff’s awesome!”



Rob Smith

### ABOUT IPG

Intertape Polymer Group Inc. (IPG) is an acknowledged leader in the packaging industry. Leveraging its advanced manufacturing and technologies, extensive research and development capabilities and a comprehensive strategic acquisition program, the company believes it has assembled the broadest and deepest range of products in the industry. IPG is widely recognized for its development and manufacture of specialized polyolefin, plastic and paper-based packaging products, as well as complementary packaging systems for industrial and retail use. Additionally, IPG is a woven and flexible intermediate bulk container (FIBC) manufacturer. Its performance products, including tapes and cloths, are designed for demanding aerospace, automotive and industrial applications and are sold to a broad range of industry/specialty distributors, retail stores and large end-users in diverse industries.



## CONSTRUCTION SEQUENCE



1



2



3



4



5



6