

NEW GEOSYNTHETIC CLAY LINER (GCL) PROVIDES COST EFFECTIVE SOLUTION FOR CANAL APPLICATION

In an effort to reduce seepage in the Lower Bucks County portion of the Delaware Canal, the Pennsylvania DCNR recently installed approximately 350,000 square feet of geosynthetic clay liner (GCL). A geosynthetic clay liner is a manufactured hydraulic barrier consisting of high swelling sodium bentonite clay bonded to geotextiles and/or geomembranes. 4,000 linear feet of canal was lined with Bentomat CL. The GCL was used as a replacement for 1 foot of compacted clay at a cost savings of over \$250,000.00. Once deployed, the GCL was covered with 12' of soil, seeded and covered with a straw erosion mat.

The Composite Laminates (CL) from CETCO are composed of two carrier geotextiles that encapsulate a layer of Volclay sodium bentonite. A composite lamination gives the GCL excellent hydraulic performance and provides puncture and tensile strengths beyond conventional plastic membranes. The CL range is ideal for ponds, landfills, surface impoundments, wastewater lagoons and other containment projects. CETCO GCLs provide better hydraulic performance than several feet of compacted clay with a total composite thickness of less than one inch.

By providing a 33% reduction in weight and profile depth, the GCL application minimized the environmental impacts from sediment, dust, noise, and non-point source pollution. Bentomat CL was selected because of the expected high hydraulic head and self healing properties of bentonite. CETCO GCLs are manufactured in large rolls, require just a simple overlap of seams, unlike compacted clay liners, and are not affected freeze-thaw or wet-dry cycles.

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Above Insert: GCL (Geosynthetic Clay Liner) composite profile.

Above: Mechanical Placement of GCL.

Right Insert: Example of self-healing properties of GCL.

Right: Cover soil being deployed on top of GCL.

Below: Finished canal application.



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GCL Applications Include:
Basins / Ponds / Sinkholes
Lagoons / Constructed Wetlands

Cetco Introduces ...COMPOSITE LINER SYSTEM—BENTOMAT CL and CLAYMAX CL

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