

ANCHORAGE LANDFILL EXPANSION, ALASKA

Expanding landfill capacity in challenging environments



Industry: Waste
Sub-industry: Solid, industrial waste
Location: Alaska
Product: **GSE® HD, BENTOLINER®**

Overview

In 2020, the Municipality of Anchorage's Solid Waste Services department (SWS) made the decision to expand its landfill capacity by adding a new cell 9 and connecting it to several existing cells in close proximity. Alaska Aggregate Products, LLC (AAP), was awarded the contract for geosynthetics and piping and selected Solmax to supply all the required geosynthetics. AAP installed approximately 650,000 ft² (60,000 m²) of a composite liner system for the new cell. The liner composite system included **BENTOLINER NW** Geosynthetic Clay Liner (GCL), an 80 mil (2 mm) double-sided textured **GSE HD** liner, and a 16-ounce (450 g) cushion geotextile with an HDPE leachate collection piping system.

Challenge

For this project, a site-specific slope-stability analysis was conducted by the engineering firm, Bristol Engineering Services Company, LLC. The specifications required a GCL material that had undergone prior testing and met the specified requirements. Bristol demanded interface-shear testing on the **BENTOLINER NW** GCL supplied by Solmax to verify its compliance with all site specifications.

The project faced logistical hurdles and extended lead times for material delivery to Alaska, as well as the need to keep the project on track during the rainy months when Alaska experiences the highest precipitation.

CASE STUDY

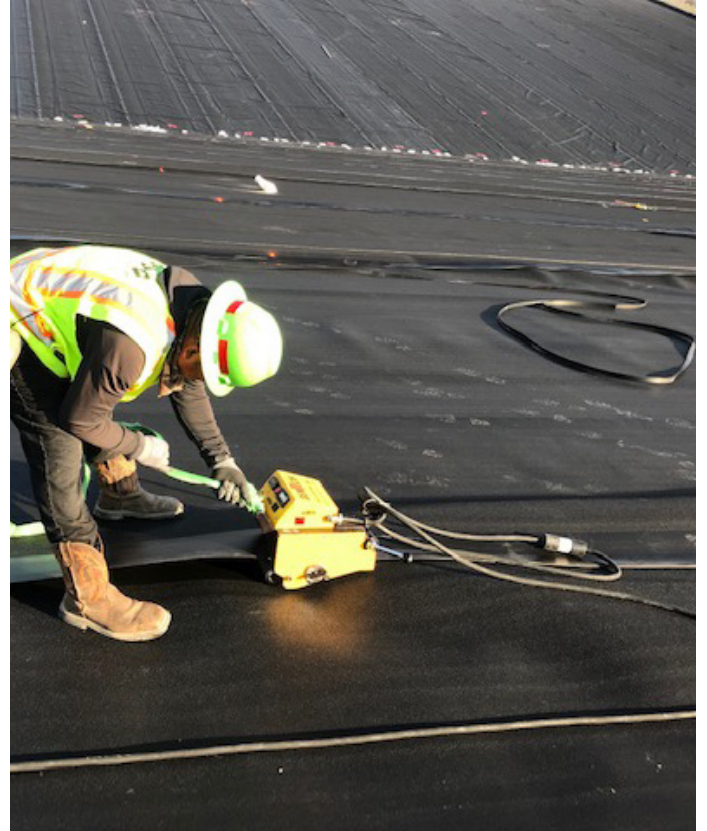
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Specifically, 02078 2.3 C 8 required that “interfaces shall have, at a minimum, a friction angle of 11.5 degrees and a cohesion of 250 pounds per square foot (psf), or an equivalent combination of Mohr-Coulomb strength parameters, across the range of normal loads and displacements tested.”

Solution

Solmax conducted all necessary testing and provided comprehensive data to demonstrate that its **BENTOLINER NW** material exceeded all the requirements outlined in the specifications. All testing results were delivered punctually, without any impact on the project’s schedule.

Solmax faced two significant challenges during this project: logistical hurdles and extended lead times for material delivery to Alaska, as well as the need to keep the project on track during the rainy months when Alaska experiences the highest precipitation. AAP maximized productivity on favorable weather days by extending working hours and deploying as much GCL and liner as possible to ensure the project’s timely completion within budget constraints. Solmax’s logistics department worked closely with AAP and AAP’s freight subcontractor to coordinate and guarantee the on-time delivery of all materials.



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