



DRAINTUBE®



GEOCONDUCT®



ALVEODRAIN®



NOTEX C®



NOTEX®



GEOTER®



MINING INDUSTRY



ENVIRONMENTAL ENGINEERING



BUILDING CONSTRUCTION



PUBLIC WORKS

Leadville, Colorado Union Mill pond, leak detection layer

CONTEXT

Located in Leadville, CO – The heart of Colorado Gold Country. Opened in 1985, the former Leadville Mill extracted gold and silver from low-grade ore mined from various area mines. The mill closed in 2001 and was purchased by Union Milling in 2009 with hopes of eventually reopening and processing the remaining onsite ore. After over a decade of studies and evaluation, the mill took the next step in the approval process by constructing a 2.2-acre storage facility to contain the sodium cyanide loaded byproduct.

ISSUES

Stringent environmental regulations required extensive scrutiny into the safe use and containment of the sodium cyanide loaded byproduct. The containment facility was required to include leak detection and wells to monitor groundwater quality. Extreme site conditions included steep slopes, a short construction season, high elevation, and tight deployment access. The selection process for geosynthetics needed to keep all these issues in mind.

DESIGN RETAINED

A drainage geocomposite was specified as part of the leak detection system between a primary reinforced polyethylene geomembrane and geosynthetic clay liner. Working with Union Milling and the contracted geosynthetics installer, Simbeck and Associates, DRAINTUBE 606 ST1 D25 was selected as the drainage geocomposite. DRAINTUBE® was selected due to its proven drainage performance making it ideal for leak detection applications. It also provided an additional cushion for the overlying geomembrane.

ADVANTAGES

- The perforated mini-pipes in the product direct the flow into the leak detection sump
- Fast delivery and easy installation helped the geosynthetic installer meet their deadline
- The DRAINTUBE® was able to tack directly to the GCL to avoid wind uplift
- A very good Health & Safety records for the installation crew on site

“Installation of DRAINTUBE on this project was simple, fast, and will no doubt be effective should any seepage develop through the primary layer in this double lined system. I particularly liked:

- *Being able to tie-in directly to the leak detection structure,*
- *The mini tube connections were easy and strong using the quick couplers,*
- *The ease of cutting using scissors (vs razor knives) was safer for the technicians and reduced the risk of accidental damage to the secondary liner below.*

I really hope to see multi-linear drainage composites used more frequently on projects since the price, performance, versatility, and ease of installation benefits everyone.”

Brendan Simbeck – Project Manager, Simbeck and Associates



Installation of DRAINTUBE 606 ST1 D25 as leak detection layer between the primary reinforced polyethylene geomembrane and the geosynthetic clay liner.



DRAINTUBE® installation on the slope. The product is light and flexible making it easy to install.



Tacking of the DRAINTUBE® on the GCL. The multi-linear geocomposite provides an additional cushion for the overlying geomembrane.

PROJECT SUMMARY

Products	DRAINTUBE 606 ST1 D25		
Quantity	9,000 m² (100,000 sq ft)	Design	Union Milling - In-House
Application	Leak detection layer	Installation	Simbeck & Associates, Inc.
Owner	Union Milling	Years	2021



DRAINTUBE®



GEOCONDUCT®



ALVEODRAIN®



NOTEX C®



NOTEX®



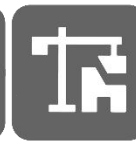
GEOTER®



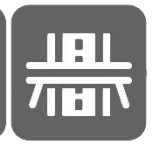
MINING
INDUSTRY



ENVIRONMENTAL
ENGINEERING



BUILDING
CONSTRUCTION



PUBLIC
WORKS

AFITEX-TEXEL GEOSYNTHETICS ADDED VALUE

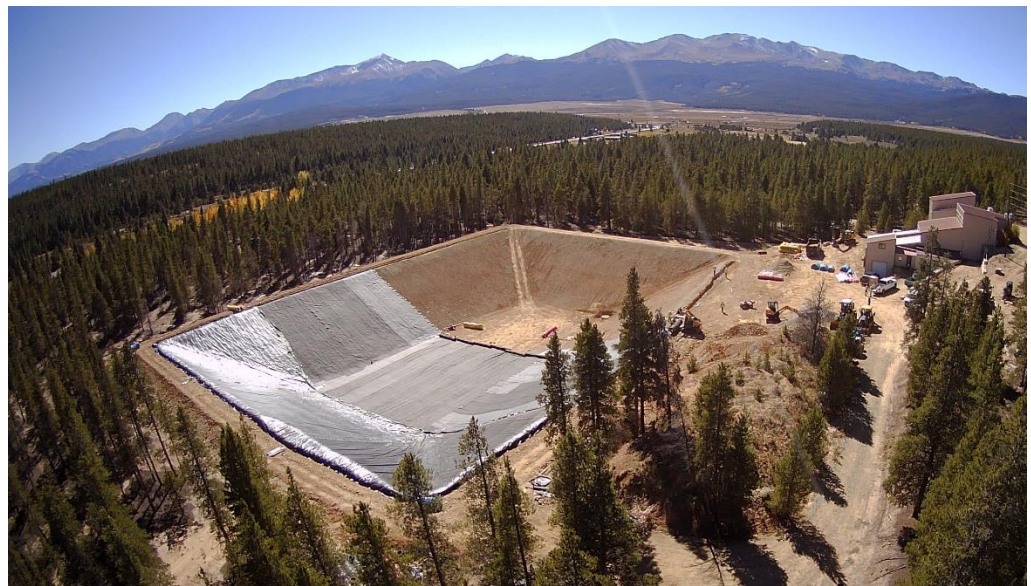
The expertise of the AFITEX-Textel team provided the designers with all the necessary information and technical support to choose the most suitable solution based on the project's parameters.

« What AFITEX-TEXEL has to offer »

AFITEX-Textel will be pleased to assist you in the evaluation and design of your next projects, because our approach has always been and always will be the same: the right product, in the right place, well installed with rigorous quality control.

In case you need technical support? Feel free to refer to the AFITEX-Textel team. Expert services will be provided free of charge:

- Technical Assistance
- Assistance during Design
- Technical Training
- Technical Documentation
- Calculation Tools
- Specification & Tender documents
- Installation Guidelines



Union Mill pond, Leadville CO - 2021



YOU NEED MORE INFO?

Never hesitate to contact one of our specialists in order to know more about the benefits you can get from your projects

1-800-463-0088

Available documentation

- Technical data sheets
- Installation guidelines
- Standards & Studies
- List of projects
- Design Software

www.afitextexel.com

Important notice - The information contained in this document is provided for promotional purposes only. Thus, not all the characteristics of the project have been mentioned. No guarantee is offered by AFITEX-Textel or its partners with regard to the information contained in this document.

**1300, 2^e rue, Parc Industriel
Sainte-Marie-de-Beauce (Québec)
G6E 1G8 CANADA**