



DRAINTUBE®



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# Mesa County, CO

## Grand Junction's Landfill expansion

### CONTEXT

Located in Grand Junction, CO, the Mesa County landfill is open since 1981 and operated by the county since 1996. The landfill has a footprint of 127 hectares and treats 170,000 tons of waste per year. Cells 7a and 7b have been constructed in 2018 and 2020 as expansion cells for an extra capacity of more than 300,000 cubic yards in total.

### ISSUES

Souder Miller Associates (SMA) designed the Leachate Collection and Removal System (LCRS) of the new cells including the sump pump and the double lined pond for leachate storage and treatment. As granular material is generally too expensive or difficult to find, the leachate collection layer included a drainage geocomposite. The DRAINTUBE® technology has been chosen among other geocomposites to reduce the costs of the project and optimize the construction time.

The great behavior of DRAINTUBE® against creep under high loads was another important element in the final decision as it gave a higher factor of safety on the long-term efficiency.

### RETAINED DESIGN

The final design is as follow:

- Cells (from bottom to top):
  - 12 inches of compacted clay
  - 60-mil HDPE geomembrane
  - DRAINTUBE 606 ST1 D20
  - 12 inches of native soil
  - Waste
  
- Leachate pond (from bottom to top):
  - 12 inches of compacted clay
  - 60-mil HDPE geomembrane
  - DRAINTUBE 606 ST1 D20
  - 60 mil HDPE geomembrane
  - Leachate

### ADVANTAGES

- Reduction of 90% of the expected truck traffic
- Reduction of the social and environmental footprint
- Fast installation to keep short deadlines
- A very good Health & Safety records for the installation crew on site
- 100% conformance testing passed



Manual installation of DRAINTUBE 606 ST1 D20 as part of the leachate collection system over a 60-mil HDPE geomembrane. Light rolls are easier and faster to install.



Installation in the slopes using a spreader bar. When the use of such equipment is possible, the installation is even faster.



Rolls of DRAINTUBE 606 ST1 D20 in stack ready to be unpacked and installed.

### PROJECT SUMMARY

|                    |   |                     |                                 |
|--------------------|---|---------------------|---------------------------------|
| <b>Products</b>    | <b>DRAINTUBE 606 ST1 D20</b>                |                     |                                 |
| <b>Quantity</b>    | <b>25,000 m<sup>2</sup> (260,000 sq ft)</b> | <b>Design</b>       | <b>Souder Miller Associates</b> |
| <b>Application</b> | <b>Primary Leachate Collection</b>          | <b>Installation</b> | <b>Simbeck Associates</b>       |
| <b>Owner</b>       | <b>Mesa County, Colorado</b>                | <b>Years</b>        | <b>2018 - 2020</b>              |



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## AFITEX-TEXEL GEOSYNTHETICS ADDED VALUE

The expertise of the AFITEX-TEXEL 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-TEXEL 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-TEXEL 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



### YOU NEED MORE INFO?

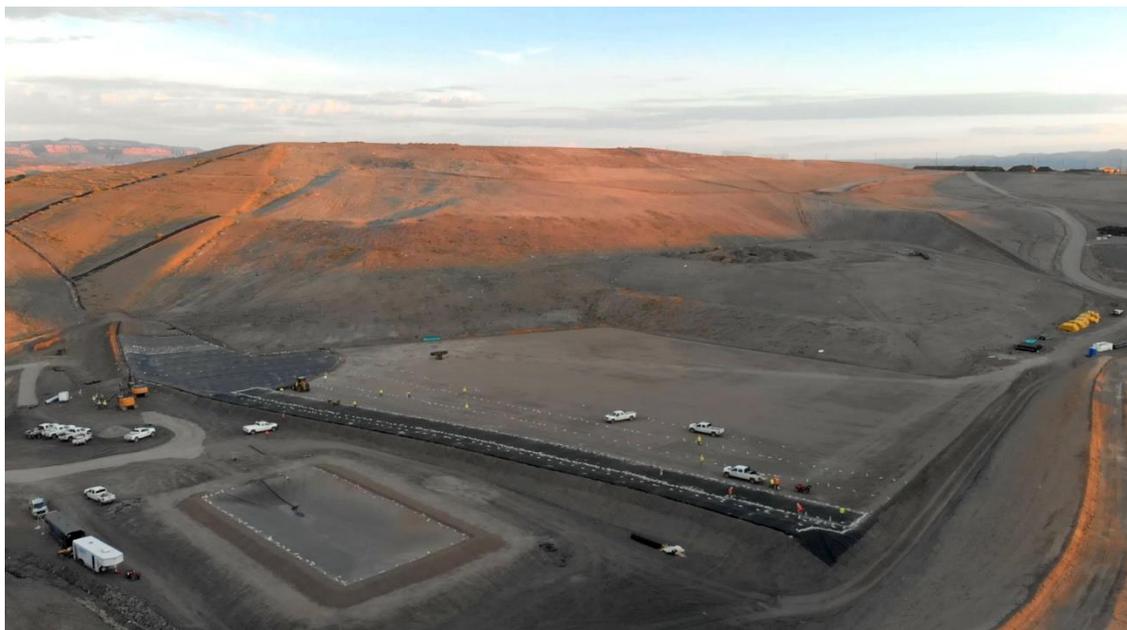
Never hesitate to contact one of our specialists in order to know more about the benefits you can get from your projects

**1-800-463-0088**

#### Available documentation

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

**[www.afitextexel.com](http://www.afitextexel.com)**



Mesa County Colorado, Grand Junction's Landfill – Cell 7a – 2018

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