The Background

The Aberdeen-Springfield Canal Company is one of the oldest canal companies in the United States. It was granted water rights from the Snake River in 1895 after congress passed the Carey Act, also known as the “Desert Lands Act”, in 1894. The main canals and most of the laterals were completed before 1910 and serviced more than 50,000 acres. Today the Aberdeen Springfield Canal Company services more than 60,000 acres and diverts approximately 325,000 acre-feet of water. The construction of the original canal through sandy gravel soils and fractured basalt has accounted for almost more than half of that water being lost through the system. With the help of grants from the Bureau of Reclamation the Aberdeen Springfield Canal Company has taken proactive steps to conserve water loss through seepage.

The Challenge

Intertape Polymer Group®’s (IPG®) ECP Division was contacted to provide a geomembrane liner which would be durable enough to bridge the rocky canal, and have enough friction interaction with the soils, to provide a long lasting barrier preventing costly seepage loss through the canal. The liner also had to be installed quickly, as there is a small window between growing seasons and winter months for which the work could be completed.

The canal would have to be reshaped and graded prior to installation of the liner, there is typically a one month window from the time the water is shut off until winter conditions make working on the site hazardous.

The reshaping and grading of the canal was the most time-consuming portion of the project. It took 15 employees, 2 bulldozers, 5 excavators, 1 front end loader and 1 small grader less than 20 days to have the canal prepared and ready for the installation of the liner.
The Solution

IPG's NovaGrip™ 30 textured geomembrane was chosen as the best product for which the Canal Company could achieve superior results under such difficult conditions. NovaGrip 30 is a woven, coated geomembrane that is textured on one side to provide maximum soil interaction with the liner. Since the liner was to be buried under the existing rocky soils, a dependable, strong liner with high soil interaction was needed. Another reason NovaGrip 30 was chosen was its ability to be delivered to the site in large factory prepared panels, reducing the time-consuming field seaming process.

IPG’s NovaGrip 30 was delivered to the site in custom panels 100’ wide x 300’ long to meet the exact dimensions of the canal. Each panel was then placed into the canal and welded together using the on-site equipment and personnel. 4,200 LF of Canal Lining was installed in less than one week, keeping the project ahead of schedule.

Reducing the seepage loss and extending the life of the canal was the goal and with the help of IPG’s NovaGrip 30 the Aberdeen-Springfield Canal Company is looking to conserve more than 75 cfs (approx. 30,000 acre-feet of water) per year with this project. The Aberdeen-Springfield Canal Company and IPG have taken a monumental step forward to conserving the precious water resources in the Snake River Valley.

For more information, contact your local IPG representative. There is also a short video of the project which can be seen on The Aberdeen-Springfield Canal Company’s website photo gallery (http://www.ascanal.org/home/photo-gallery).

This 4,000’ installation was the first phase of a long-term plan, with another 5,000’ in the main canal and 2,000’ in the lowline canal planned for Spring/Fall, 2017.

References: Aberdeen-Springfield Canal Company History

Steve Howser General Manager - Aberdeen-Springfield Canal Company

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