

## Project Info



08 / 07 / 14



CC8™ Bulk Rolls



1,000m<sup>2</sup>



Transverse layers



Chayvo OPF Onshore  
Processing Facility,  
Sakhalin, Russia



VECO, a CH2M Hill  
Company



Lining drainage  
channels in front of  
PLF (Production Living  
Facility) Building to avoid  
erosion and undermining  
of the building and road.



Completed section ditch lined with CC8™

In July 2014, Concrete Canvas® GCCM\* (CC) was used to line a drainage ditch at the Chayvo OPF Onshore Processing Facility, Sakhalin, Russia. There was a risk of erosion undermining the Production Living Facility (PLF), situated behind the ditch, and the nearby road. Due to the weather conditions in Sakhalin, there are only a few months a year where construction work feasibly take place, so speed was of the essence. The works were carried out by VECO, a CH2M Hill Company, for Exxon Neftegas Limited. CC was chosen due to the limited resources on site, limited access and cost effectiveness compared to conventional concreting methods.

The ditch was re-graded using an excavator, vegetation removed and an anchor trench cut on either shoulder. CC8™ bulk rolls were deployed transversely across the ditch profile using a Zoom Boom and spreader beam. The CC was either unrolled down from the crest of the ditch, or unrolled on the flat. The CC was then cut to specific profile lengths using a utility knife, eliminating wastage. Subsequent layers were overlapped by 100mm in the direction of water flow before being fixed to the substrate with 375mm J-pegs. The overlaps were then sealed with Dow Corning 762 sealant, screwed at 200mm centres with 30mm coated screws, and hydrated with a pressure hose and 7000L bowser.

The installation was considered a huge success, as alternatives such as poured concrete are difficult to obtain there, and can cost up to 2,750USD/m<sup>3</sup>. The extreme climate in Chayvo, where the camp can be under 4m of snow for 8 Months of the Year, experiencing temperatures as low as -40 degrees Celcius meant that CC would be an enabling technology for ENL, allowing complete infrastructure projects to be completed in a single season.

\*Geosynthetic Cementitious Composite Mat







*The ditch was excavated and graded to profile*



*CC8™ bulk rolls were unrolled across the ditch and into anchor trenches*



*Unset CC8™ cut to length, avoiding wastage*



*CC8™ sealed, screwed and fixed to the substrate with ground pegs*



*Hydration with a pressure hose from a 7000 litre bowser*



*The finished project*