

Project Info



04 / 06 / 17



CCH5™ Bulk Rolls



2,250m²



Vertical and Longitudinal
layers



Drill Site DMMM-500,
Dhahran, Saudi Arabia



FOQSCO



CCH used to provide
erosion protection to a
slope and surrounding
area to prevent damage
to nearby rig site



Completed CCH installation in Dhahran, Saudi Arabia

In June 2017, CC Hydro™ (CCH) GCCB* was specified as an erosion control solution to a slope and surrounding area on a Saudi Aramco owned site in Dhahran, Saudi Arabia.

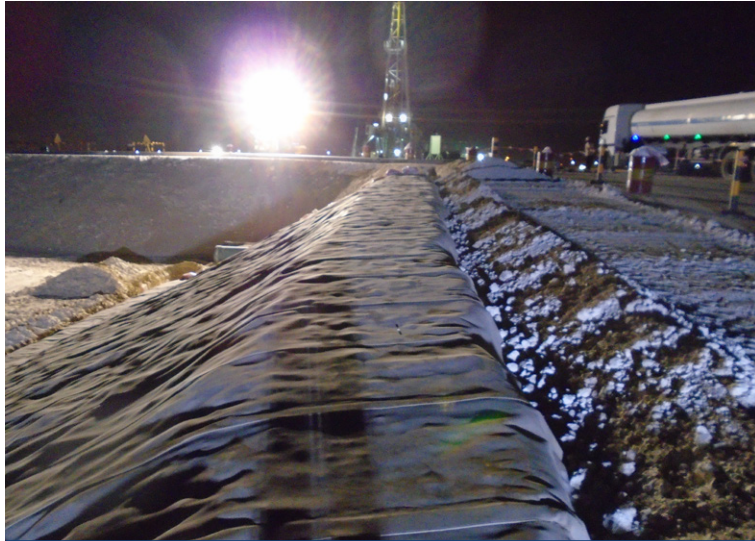
The area requiring protection was situated less than 100m from a drill site. Two outflow pipes emerging from the slopes make up part of a drainage system from the surrounding areas. The water flow from the slopes was at risk of causing erosion and potentially damaging the drill site. Therefore, the client required sufficient protection of the outflow area to protect the surrounding infrastructure.

Time was the main constraint on this project, as the client required works to be completed within seven days. Conventional concrete was considered but would have required a significant amount of time on site and therefore could not possibly meet this deadline.

Prior to installation, the slope faces and ground substrate of the surrounding area were graded to provide as smooth a surface for installation as possible. Anchor trenches were created at the crest and toe of the slopes using a JCB backhoe. Further anchor trenches were prepared at the two remaining edges of the ground area that required protection.

*Geosynthetic Cementitious Composite Barrier





Completed installation on first slope - CCH captured within anchor trench



Deployment of CCH on ground below slopes



Thermal welding of CCH layers for impermeable joints



Hydration of CCH was carried out twice with 2 hour interval



Completed installation



CCH installed around outflow pipes



The installation was carried out in just four days

The specified CCH5™ material was primarily installed on the slopes using a boom truck and spreader beam. The bulk rolls of material were deployed from the crest of the slopes, and unrolled vertically down the slope face, with leading and trailing edges secured in the anchor trenches using ground pegs once the material was cut to required length. Once the material had been deployed over the ground, a triple track welder and hot air gun and roller were used to joint the material. CC Hydro™ is manufactured with a hi-visibility welding strip allowing joints to be thermally welded providing an air channel for on-site testing.

Once installation was complete, the material was hydrated and the anchor trenches backfilled with poured concrete. Due to the hot, dry weather conditions, hydration was repeated after a two-hour interval to ensure sufficient saturation. Railings were installed on all four sides of the installation area to prevent trafficking.

A total of 2250m² of CCH5™ were installed by a team of 11. The weather conditions experienced at this time of year meant that works had to be carried out at night and in the early hours of the morning for the safety of the work crew. Despite this, the whole project took about four days to complete with CC, a considerable time saving compared to conventional concrete.