BP Kewdale White Oil Line Relocation

OIL/GAS | SEWER | STORMWATER | POWER | WATER | TELCO

PROJECT OVERVIEW

UEA successfully completed four HDD installations on a major project in South Perth, Western Australia. All of the bores had their own challenges largely due to the difficult sandy ground conditions. The success of this project can be attributed to the dedicated teams on the ground who worked tirelessly around the clock, and having fit for purpose equipment. UEA installed a total of 3.8 kilometres of steel pipe over the duration of the project.

LOCATION
Canningvale
Western Australia

CLIENT
Spiecapag

PIPE
323.8mm Steel

GEOLOGY
Sand

LENGTH
Total length 3.8km

TECHNIQUE
HDD

SCOPE OF WORKS

Trenchless often makes up only a fraction of larger pipeline installations, but this was not the case with the KWOL fuel pipeline project, which benefited from HDD for almost the entire length of the project.

UEA was proud to deliver a significant horizontal directional drilling scope for the Kewdale White Oil Line (KWOL) relocation project. The installations were delivered for multi-government transport agency METRONET, as part of the larger 12 kilometre pipeline project linking the BP Kwinana refinery with Perth Airport's Kewdale terminal.

While the company had completed several similar projects, KWOL presented some unique factors which needed to be carefully managed from the early stages. *UEA's Operations Manager, Jonathan de Vos, said "we had small and very narrow spaces to work within, as all of the works were to be conducted in the existing rail easements, and the ground conditions also presented potential complexities for drilling. We had Perth running sand, similar to what we experienced at the Parmelia Gas Pipeline, combined with a high water table – and we knew that wouldn't be a forgiving combination."* Jonathan said that knowing this, the project required a particularly detailed design and planning works.

With four boreholes in scope, ranging from 600 metres to over 1,100 metres in length, UEA mobilised both its Herrenknecht 250C and Vermeer D330 rigs along with supporting equipment for construction. With the ground conditions living up to their tricky potential, UEA drew on its experience in similar conditions to mitigate issues as they arose. “Our works in the sand at Parmelia last year were fresh in our minds, and we had that experience to draw upon to deal with the ground conditions,” Jonathan said. “Keeping things moving and minimising stoppages is key in these conditions, so this is what we planned in our schedule.”

Drilling and installation of the four HDDs was completed in September 2022.

UEA General Manager, Steve Hopkins, said that UEA was pleased to have executed the crossings in a project which truly showcased the capabilities of HDD. “We rarely see trenchless used to such a majority in pipelines – with 11 kilometres of the total 12 kilometre pipeline length delivered via trenchless, KWOL was an outlier,” Steve said, “but this project really demonstrated how trenchless can make these types of pipelines possible. We’re happy that METRONET gave us the opportunity to showcase that.”