CASE STUDY
CAUSTIC BUND SECONDARY CONTAINMENT
SOUTH TREES ISLAND, AUSTRALIA

Contractor : McCosker Contracting Pty Ltd
Date of Project : June, 2019
Products / System Used :
LiquiBond - 2L p/m²
Geotuff 220 - in non-trafficable areas
Tufflon-P80 - 3000µm

THE PROJECT

The asset owner approached the LiquiMix team seeking a secondary containment system for sealing several large bunds containing 50% Caustic Soda solution stored in mild steel tanks. The substrate in the bunds was Roadbase. The lining system had to conform to the complex shapes within the bunds and bund walls; it had to be applied in a timely manner; and it had to be tough enough to withstand pedestrian and vehicle traffic in certain areas. Due to unusually high movement in the sub-ground areas, the lining system also had to be flexible enough to move and stretch without cracking or tearing.

THE SOLUTION

LiquiMix chemists initiated immersion testing in a 50% Caustic Soda solution of several grades of polyurea. Tufflon-P80 soon showed it had superior resistance and, coupled with some other unique physical properties, was nominated as the lining material of choice. LiquiMix tested the system on a small section of the bund where it would be subjected to heavy vehicle traffic. One month later, after extensive testing, the system remained intact and unchanged.

THE RESULT

The specified secondary containment lining system provided an expected service life of 20 years, and the solution worked efficiently and effectively and is still performing at a high quality level. The general recommendations for future projects are to use Tufflon-P80's superbly tough and elastomeric, abrasion-resistant characteristics to line bunds for Caustic cargos and other chemicals in the mining industry.


Before Application


During Application


During Application


After Application