



QUICK CONCEPT TANK FACTS

Tank Capacity	1 Million Gallons & 4 Million Gallons
Wall Height	12 Feet
Build Time	1 Month
Fluid Quality	Refinery Process Effluent
Liner System	Enviro Liner® 6040 Conductive Geotextile Geonet Enviro Liner® 6040 Geotextile Geosynthetic Clay Liner
Leak Detection	Yes

THE CHALLENGE:

The site was experiencing an ongoing issue of losing valuable process fluid to their tailings dam during planned and unplanned shutdowns. This not only placed an increased burden on the tailings dam but also prevented the opportunity to reprocess the fluid once mixed with chlorides in the existing tailing storage facility, resulting in

lost revenue. Furthermore, the site faced various challenges, including its proximity to critical energy and transport infrastructure, a high groundwater level, a corrosive environment, and a highly active operating site.

The client had explored the possibility of constructing a lined earthen pond but ultimately dismissed it due to its high cost and significant disruption to the site's operation. Additionally, the lined pit did not align with the environmental concerns of the relevant regulatory authorities, making it unavailable for use in the upcoming plant shutdown scheduled for 6 months later.

THE SOLUTION:

To address these issues, two Concept Tanks were prefabricated off-site and installed on-site within a remarkably short project timeline of just 4 months, from the initial contact to the

first use. The use of Concept Tanks significantly expedited the permitting process, reducing what would typically be a two-year timeline to just three months. These tanks, with capacities of 1 and 4 million gallons, were equipped with a combination of six geomembrane and geotextile liners, enhancing leak detection and containment monitoring capabilities while also reducing the overall footprint required for the storage facility.

The pre-engineered, post-tensioned design of the Concept Tanks allowed for swift installation once approved, with both tanks being ready for use within the following month after obtaining permitting approval. This streamlined the on-site logistics and resulted in fewer vehicle movements, ultimately improving safety outcomes and minimizing disruptions to refinery operations. To safeguard the tanks from the corrosive environment, all steel elements were coated, galvanized, or made of stainless steel.

Thanks to the exceptional performance of these tanks, two more larger Concept Tanks are currently being installed on-site to alleviate further pressure on the existing tailings storage facility.