

Earthen Containment Bund

Category: Secondary Containment

Project: Earthen Bunds

Products: Rhino Linings PP1195®



Job Description:

Containment Barrier Area Over Geotextile and Earthen Bunds

Rhino Linings provide a proven solution for dependable containment around tank fields or drilling well heads. The oil and gas industry requires containment and protective coating systems that meet strict industry requirements and that stand up to extreme weather conditions. Rhino Linings secondary containment systems provide a monolithic, impermeable lining that meets or exceeds these standards and install within a day, reducing tank farm and terminal downtime.

The Challenge: The 2002 USA Environmental Protection Agency (EPA) rules specified that all industries dealing with liquid primary containment must also provide secondary containment equal to one-half times the amount of material in the largest primary vessel. This helps to ensure that the fluid does not leach into the surrounding soil and contaminate the area. Many companies have placed their tank farms in concrete containment areas for decades only now to find the containment is not adequate. These concrete containments often develop hairline to large, more visible cracks throughout the tank farm, allowing leaked products to leach into the soil below. Now that the oil and gas industries have turned to oil shale as a new energy source, there are additional regulations regarding

containment. Before any drilling can take place the entire area must be contained.

SOLUTION: Rhino Linings Industrial applicators use 10-ounce pin-punched, non-woven geotextile fabric and Rhino PP1195 polyurea lining to create an impervious containment area. The combination of the geotextile and Rhino PP1195 spray elastomer creates an impermeable barrier that not only prevents contamination from spills/leaks, but also provides enough structural integrity to handle heavy vehicle traffic and extreme weather conditions. The geotextile fabric is rolled out with the ironed side up. Seams are overlapped by approximately 100-150mm and bonded together. The fabric is bunched in areas to allow for shrinkage. The shrinkage should be around 2 – 3 percent and must be considered when placing the fabric. When Rhino PP1195 is sprayed at 3mm over the geotextile, the bunched fabric smooths out to provide seamless, impermeable containment.

RESULTS: Rhino PP1195 over geotextile is one of the fastest ways to install a dependable containment area around tank fields or drilling well heads. In less than a day, applicators can create seamless containment linings that cover thousands of meters. The application process is fast and requires fewer man-hours than polyethylene or mechanically seamed systems. Common problems caused by traditional plastic liner such as leaking seams, wind uplift and concrete cracks are addressed with this application.

CASE STUDY

Rhino PP1195 is a two component, rapid curing, elastomeric polyurea lining system. Rhino PP1195 is specifically designed to be used over geotextile fabric and is formulated for colder substrate applications and extreme outdoor conditions where water, humidity or low temperatures may exist. It is a fast-set lining with superior hardness and elongation, high tensile strength, and excellent tear and abrasion resistance.

