$2 Billion Power Industry Plant Uses PREPRUFE® Waterproofing in Below Grade Application

GCP facilitated the waterproofing of a renewable energy manufacturing facility in Singapore

Client	Renewable Energy Corporation ASA (REC)
GCP Solution	PREPRUFE® 300R waterproofing

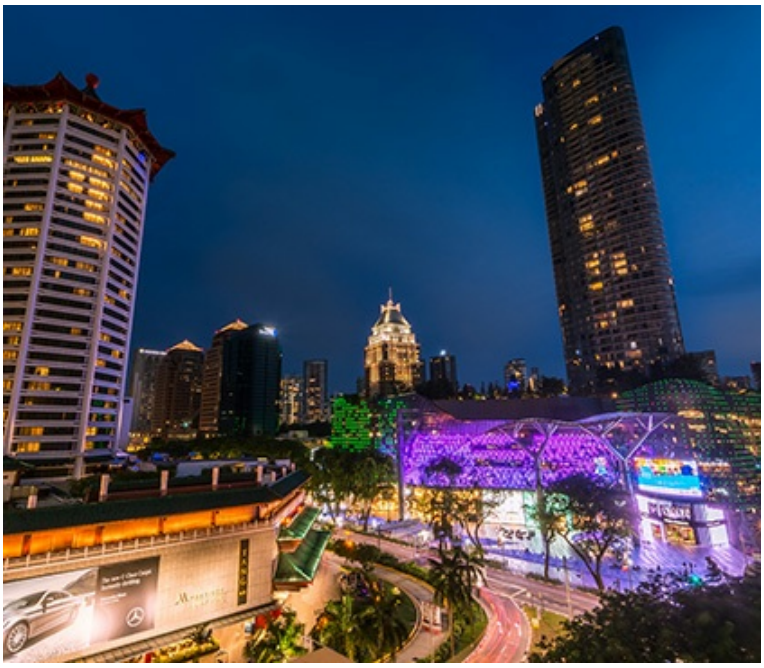
The Overview

The Project

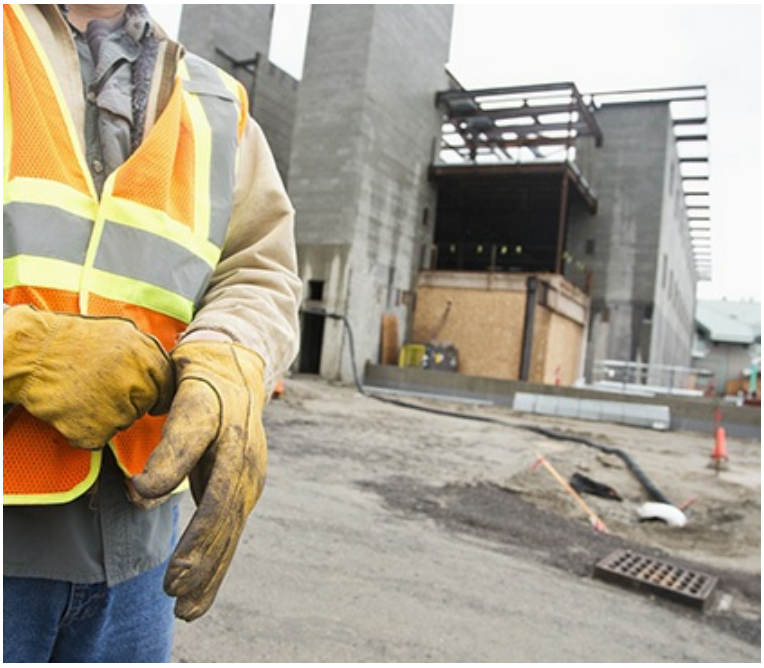
Oslo-based Renewable Energy Corporation ASA (REC) built the world's largest manufacturing facility for solar energy products in Singapore. The first phase of the project involved the building of an integrated manufacturing facility on a 25-hectare site in Tuas—the western part of Singapore—at a cost of $2 billion USD.

The Tuas manufacturing complex produces solar wafers, cells and modules for the international power industry market. The first such clean and renewable energy plant in South East Asia, research and development forms an important part of the Tuas complex's operations.

"The use of Preprufe® waterproofing has helped improve the schedule of waterproofing application at the REC facility construction."



The Challenge



The REC manufacturing complex was built on a site that sat on reclaimed land, with soil less compact than natural soil. There were concerns with soil settlement and how this would affect waterproofing of the substructure. Due to the environment sensitive work that was carried out at this power industry manufacturing facility and laboratories, moisture and waterproofing specifications were set at a stringent 6% or less.

The tight construction schedule was another project challenge. A total of eight months was set aside for waterproofing work covering a surface area of more than 70,000m2. Fast and efficient application of the waterproofing product without compromising performance thus became a critical factor when considering waterproofing options.

The Solution

Installing a high performing vapour barrier was key to ensuring below grade waterproofing. After careful evaluation, the power industry project team selected PREPRUFE®300R pre-applied waterproofing membrane for the underside of base slabs.

PREPRUFE®membranes can be applied to smooth prepared concrete or compacted sand horizontally, or permanent formwork or adjoining structures vertically. This speeds up application and construction. Concrete is then cast directly against the membrane's adhesive side.

PREPRUFE®waterproofing forms an integral bond with the concrete, providing a unique seal against the migration of water and remains unaffected by ground settlement beneath slabs.

Blue360℠ Product Performance Advantage: *Because every project, large or small, deserves the best level of protection.*

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