

# The Uranium Mine Trekkopje

Namib Desert, Namibia, Africa (2013)

PRODUCT USED:  
**Hard-Cem<sup>®</sup>**



## OWNER:

Orano

## ENGINEER:

Bateman Engineering

## CONTRACTOR:

Stefanutti Stocks Holdings Ltd.

## BACKGROUND

Known as one of the largest reserves for uranium in Namibia, the Trekkopje mine is located in Western Namibia, approximately 65 km northeast of Swakopmund.

As part of its maxi project's construction, the mine was envisioned as a composite of numerous structures. Some of which included a crushing plant, a screening plant, an agglomeration plant, concrete silos, and other associated buildings. Many areas within and around these new structures would likely face the abrasive effects of incoming and ongoing heavy equipment. As a commonplace feature for such mines, this equipment would help with conventional mining methods, such as scraping, drilling, blasting, loading, and hauling ore to the treatment plant. At the same time, wheel loaders, haul trucks, and large hydraulic excavators and shovels, all with the capacity to move 60,000 tons per day, would also be carrying out mining activities nearby.

The mine's construction team knew all this activity would wear down the concrete areas in the mine, however. As a result, the engineering firm associated with the project, Bateman Engineering, specified Hard-Cem as the mine's concrete hardening technology for the primary feed silo, the agglomeration feed silo, and the large uranium ore storage silos, which are 30-meters high and 17-meters wide with walls that are 0.3-meters thick.

## SOLUTION

Having proven its worth in demanding environments where durability is key, Hard-Cem was the ideal no-risk concrete hardening solution for this project. Moreover, Hard-Cem's integral quality uniquely qualifies it for vertical applications where traditional hardeners cannot work. In fact, this integral hardener is engineered to double the service life of concrete, which will have a significant positive impact on the lifespan of the mine's silos. For instance, the durability-enhancing qualities of Hard-Cem will allow the mine to stay in operation longer and significantly delay repair and maintenance downtime, which can take storage structures out of service for prolonged periods. It will also improve the structural safety of the Trekkopje mine by improving the concrete silos' resistance to abrasion.

