

North American Limestone Mining

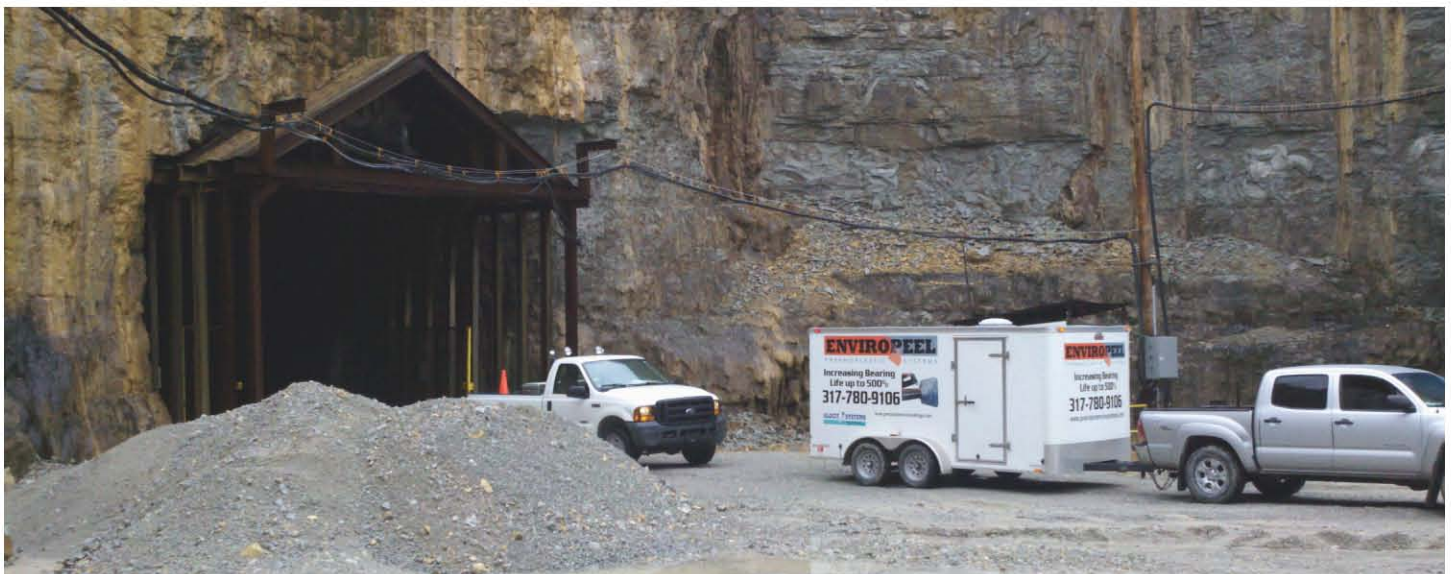
In February of 2011, Enviropeel was installed on conveyor belt pulley bearings in a central Indiana aggregate limestone quarry. Twenty-four new bearings in particularly harsh locations were chosen to be encapsulated with Enviropeel due to their exposure to constant limestone dust and the water used to wash the aggregate.

Reclaimed water full of silt is blasted at the base of these conveyors to keep limestone from building up around the tail pulley. This water is necessary for the operation but washes grease out of bearings while introducing contamination into the rotating system, resulting in premature failure. Constant pressure automatic lubrication systems were previously installed to purge contamination, with only limited success and life expectancy for many of these bearings was between 2 and 6 months. Downtime is costly for these feeder conveyors, costing the plant more than \$5,000 for every hour not in operation. A solution was desperately needed and the plant manager turned to Enviropeel for help. Over a 2 day scheduled plant shutdown, all 24 bearings were encapsulated with Enviropeel, and the coating was extended out onto the pulley shaft to add more sealing surface. Despite temperatures reaching below 10 degrees Fahrenheit, the installations were completed on time.



Top: a fresh application on a pulley bearing. Note that the Enviropeel coating continues around the rotating shaft providing excellent ingress protection.

Right and below: on site at the limestone quarry.



After one year of Enviropeel protection, all coated bearings are still in operation with no sign of failure. Due to the isolation of the bearings from contamination, lubrication frequency has been significantly decreased, resulting in lowered maintenance costs. Additional benefits include rotating shaft protection and the ability to eliminate some previously required mechanical guards. The plant manager estimates a savings of over \$20,000 in bearing costs alone in this first year of protection. This does not take into account the savings from downtime, labor for replacement, or lubrication savings. Given the success of Enviropeel in this plant, implementing our product into other area plants has begun.

Before and after: the pictures show the difference between a new application and others after a year of exposure to mine conditions.



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