

Sub-Technical Example Projects

Limestone Mine, Southern Virginia:

Sub-Tech was called in to stop very high flow (14,000 GPM) infiltration in this deep (1400 feet) mine. The depth and the associated head pressures (up to 2000 psi) made the velocity of the water extreme. We drilled and injected SealGuard II using high pressure (up to 5000 psi) pumps through a probe of our own design. Water flow at each injection site slowed immediately. Current flow rate into the injected areas is now less than 1 gallon per minute.

Potash Mine, New Mexico:

This project involved the sealing of a 2000 foot deep intake shaft. 600 gallons per minute water infiltration was freezing during the winter months, damaging the concrete shaft liner. Starting at the top of the shaft, our technicians drilled in a circular pattern and injected HyperFlex behind the shaft liner, forming a grout curtain.

Slurry Wall, World Trade Center Re-Construction Site:

This is an example of a combination grouting technique. We stopped high flow infiltrations using SealGuard II then drilled to the other side of the slurry wall and injected HyperFlex to form a grout curtain. By doing this, infiltration from the Hudson river of over 1400 GPM was controlled in days. This project was complicated by extremely cold winter weather which affected our ability to apply our grouts.

Open Pit Limestone Mine, Upstate New York:

This project serves as an example of our patented Karstic zone application. Karst is a common situation caused by the erosion of underground channels in relatively soft alkaline rock by acidic rainwater percolating through it. We introduced graduated sizes of gravel through shafts drilled to intersect the main water passages through the rock, then allowed HyperFlex to percolate through the gravel forming a watertight plug and filling the karstic zone void. This technique was used to stop 45,000 GPM of river water from flowing into the pit.