

Case Study  
Shaft Grouting / Coal Mine / WVa



Challenge Faced

A contractor driving a mine shaft at a coal mine in West Virginia descended through a layer of water bearing broken shale. Prior to the installation of the concrete shaft liner all active water infiltration must be controlled.

About the Project

Due to the amount and force of the water infiltration we used our multi-purpose single component HyperFlex formulation pumped out of 55 gallon drums with a Graco Bulldog pump. Beginning at the top of the affected area and injecting in a pattern to ensure full coverage, we introduced material until there was a strong show at the face or until the pumping pressure spiked over 5,000 psi.

Summary

Our crew quickly solved the water infiltration issues and the shaft work continued to a successful conclusion. Due to the relatively short cure time of HyperFlex, work stoppage was able to be kept to a minimum.

Key Benefits

- Faster cure time of urethane versus cement allowed work to continue faster
- Urethane can be injected into running water without washout or changes in the strength or composition of cured material
- NSF 61 approval means groundwater will not be contaminated
- Seal is hermetic and watertight, keeping gas infiltration from occurring