

Slurry Services Generating Beneficial Ad Hoc Solutions



The Mullica River Bridge is the largest bridge to be built in New Jersey in over 20 years. To relieve traffic congestion into and out of Atlantic City, 4 lanes of northbound traffic would be exclusive to the new structure with southbound traffic specifically on the existing bridge.

PROJECT DETAILS

Mullica River Bridge

Contractor: Ground Testing Inc.

LOCATION

Prot Republic, New Jersey

PRODUCTS USED

SHORE PAC®

Drilling Slurry and Additives

Slurry Engineering Services

CHALLENGE:

Acquiring mix water that would be sufficient for SHORE PAC polymer.

With plenty of water from the Mullica River, mixing of SHORE PAC polymer seemed almost too easy, but lab testing proved that the salinity did not allow for desired viscosity results. It had been decided that the best option would be to drill down to freshwater right at the site; however, the polymer again did not yield recommended viscosities.

SOLUTION:

With slurry services on-site, CETCO was able to locate a water well driller that was able to pipe water from the Chestnut Neck Marina boatyard to the slurry batch plant for mixing.

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Testing of the water would be performed prior to adding SHORE PAC polymer. To do this, a cone of depression needed to be established. Water was continuously pumped to create a reduction of pressure from the well that would be less than the surrounding aquifer. Since water pressure flows from high to low, the aquifer began to recharge and samples were taken to test the water to verify that it did not contain any saline. CETCO laboratory results proved that the piped water from the marina well was suitable for mixing.

RESULT:

CETCO services provided cost-effective solutions for even the most detrimental challenges.



Mixing SHORE PAC polymer with the marina's water allowed for desired viscosities and an economical solution to trucking in freshwater. Even though the intrusion of saltwater into the drilled shafts could not be stopped, consistent maintainable viscosities were achievable using the freshwater for mix water.

Approximately 1.5 million gallons of slurry had been used at Mullica with 16 drilled shafts 8 foot in diameter between 180-140 feet deep.



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