Project Profile: MICROTUNNELING

BRADSHAW CONSTRUCTION CORPORATION
TUNNELING SPECIALISTS

Susquehanna River Intake Tunnel
Wrightsville, PA



PROJECT OVERVIEW AND CHALLENGES

Bradshaw jacked twin 59" diameter steel casings 320 feet using a microtunnel boring machine (MTBM). The raw water intake alignment went from a new on-shore pump station to a new underwater intake structure in the Susquehanna River. The subsurface conditions consisted of weak to strong schist. The intake structure was under about 20' of water. Several interventions were made into the head of the MTBM to clear excavation spoils and replace disc cutters during the drives. Detailed planning and execution was key to coordinate the underwater retrieval of the MTBM and prevent the tunnel from being flooded. 36” DIP carrier pipe and steel air lines were pushed into the casings and grouted in place. Divers removed caps from the ends of the casings and connected the carrier pipes to the new intake structure.





PROJECT INFORMATION - 420

OWNER:
York Water Company
Jeff Hines
717-848-2984

ENGINEER:
Rummel, Kiepper, & Kahl
Joe Tack
410-728-2900

CONTRACTOR:
Kinsley Construction

COMPLETION DATE:
4/1/2004

GEOLOGY:
Rock

EXCAVATION METHOD:
Herrenknecht AVN-1200 MTBM

MINING DIMENSIONS:
640' x 59" Ø

FINAL LINING:
36" Ductile Iron Pipe
Steel Air Lines

FOR MORE INFORMATION:
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Refer to Project 420