



North Jersey Branch

The Geotechnical Group Proudly Presents

Ground Freezing Challenges for Horizontal Connection Between Shafts Under Difficult Geologic and Hydrostatic Conditions

Mr. Kenneth E. Wigg, P.E.
Senior Engineer
Moretrench American Corporation, Rockaway, New Jersey

Ground freezing to assist in horizontal tunneling presents unusual challenges to the ground freezing design-build contractor. Stresses on the frozen ground vary with depth and the strength and water tightness of the interface between the frozen ground and existing structures is critical. For the East Side CSO Tunnel project, in Portland, Oregon a hand-mined tunnel was completed between two existing concrete slurry wall shafts at 42.7m (140ft) below ground surface. This presentation discusses the design, installation and operation of the ground freezing system, together with QA/QC measures employed to ensure full closure and maintain structural competency of the frozen ground during the tunneling activities.

- Speaker:** **Kenneth E. Wigg, P.E.** *Senior Engineer, Moretrench American Corporation, Rockaway, New Jersey.*
Mr. Wigg has over 15 years experience in geotechnical groundwater control, treatment and supply and is currently a Senior Engineer with Moretrench's Rockaway New Jersey office. Mr. Wigg is a graduate of the New Jersey Institute of Technology who holds 5 professional engineering licenses along with 4 contractor's licenses. Mr. Wigg specializes in the design and construction of groundwater/leachate control, extraction and treatment systems.
- Date/Time:** **Thursday, February 11, 2010.** Registration 5:30 pm, dinner and presentation to follow.
- Location:** The Newark Club, One Newark Plaza, Newark, New Jersey.
- Cost:** \$60 for ASCE member, \$65 for nonmembers, \$35 for full time students.
- Register:** **RSVP by February 1, 2010. Send Name, phone number, and e-mail address to R. Bunting at robert.bunting@aecom.com** or feel free to call at (732) 564-3272.
- PDH Credit:** One (1) PDH pending approval.