



## ASCE Geo-Institute Pittsburgh Chapter Presents

## VERTICAL HYDRAULIC BARRIERS

Christopher Ryan, P.E., D. G.E.

Over the last 40 years, the variety of vertical barriers available to geotechnical engineer for the control of groundwater flow and to isolate chemical impacts in soil and groundwater has increased significantly. Some of the advancement has occurred with the development of better equipment, and some of the advancement has occurred through improved science, whether it is the development of polymer slurries, reactive barriers or a better understanding of the interaction of chemical contaminants with slurry materials used to construct the barriers.

Chris Ryan has made seminal contributions to the science and engineering of vertical barriers in soil and rock. He is the president of Geo-Solutions, Inc., a New Kensington, Pennsylvania-based design-build ground improvement contractor specializing in the construction of vertical barriers worldwide. Geo-Solutions, Inc. is currently completing a slurry wall extending approximately 185 feet below ground surface – the deepest slurry wall ever built with continuous slope backfilling techniques. His firm has signed a five year contract to apply their design-build vertical wall barrier and soil mixing expertise in China. Chris Ryan has received three degrees from the Massachusetts Institute of Technology. He came to Pittsburgh to work with the construction subsidiary of D'Appolonia Engineers. He founded the specialty construction firm, Geo-Con, in 1979, sold that firm to URS Corporation and founded Geo-Solutions in 1996. Geo-Solutions has been consistently ranked in the Pittsburgh 100 list of fastest growing companies and made the Inc 500 list in 2009. Mr. Ryan was recognized by the Central PA Business Times as one of Central PA's top 100 business leaders (listed first) in 2009.

## DINNER RESERVATIONS ARE REQUIRED RSVP BY FRIDAY, NOVEMBER 5, 2010

Date: Thursday, November 11, 2010

Time: 6:00 PM Social Hour with Open Bar

7:00 PM Dinner 8:00 PM Presentation

Place: Gaetano's Restaurant

1617 Banksville Road Pittsburgh, PA 15216 (412) 343-6640

Cost: \$25.00 for members of the ASCE Pittsburgh

\$35.00 for non-members Free for student members

Free for people attending 'presentation only' -

Arrive between 7:45 – 8:00pm.

Contact:

To register for the meeting:

visit www.asce-pgh.org

or contact

Stephanie M. Chechak (412) 922-5575

schechak@GFNET.com