



# 2004-2005

*March Meeting Notice*

## Minnesota Geotechnical Society

### Design, Use, and Implementation of the Fully-grouted Method for Piezometer Installation in Minnesota

Aaron T. Grosser, PE, Barr Engineering Company

Very little attention is often given to the material used as backfill for a borehole instrument. The behavior of the backfill material is critical for obtaining correct measurements because the backfill is in direct contact with both the formation and the instrument. Inadequate backfill may result in instrument readings that reflect inappropriate backfill (i.e. lack of backfill, inappropriate backfill permeability, stiffer or softer backfill than required). Single-component bentonite grouts have been used in the environmental, water-well, and petroleum industries and have been adopted for borehole instrumentation with mixed success. However, the use of single-component bentonite grouts is more involved. The use of cement-bentonite grouts for backfill in borehole instruments is the more applicable material for successfully backfilling a borehole instrument. Unfortunately, a limited amount of information is available regarding the strength/deformation and permeability of cement-bentonite grouts. The presentation will cover the design of small-scale batches of grout, testing, results, and field application of the fully-grouted method for two case histories. The case histories will show how the traditional method of sand pack and neat cement grouts have been eliminated by the use of the fully-grouted method and how the costs have been reduced in comparison to the traditional approach of Casagrande piezometer construction.

**Date:** Wednesday March 9, 2005

**Location:** Champps, Maplewood  
1734 Adolphus Street, Maplewood, MN. [Directions](#)

**Time: 6:00** Social Hour Sponsored by Soil Engineering Testing (SET)

**7:00** Dinner – Buffet style

**8:00** Presentation – Aaron T. Grosser, PE

(One professional development hour toward continuing education requirements for Professional Engineers is available).

**Cost:** \$20.00 members, \$20.00 non-members, and \$5.00 Full-time students, payable to MGS at the door.

**Reservations:** Requested by 12 Noon, Friday, March 4, 2005.

Please register via the website at <http://www.mngeotechnicalsociety.com/eventsmpls.asp> or call Ryan Peterson with your reservation. Ryan may be reached by phone: (612) 379-8805 or fax: (612) 379-8160

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