

GEOTECHNICAL & CONSTRUCTION INSPECTION SERVICES

NCSA Petascale Computing Facility and TES Tank
University of Illinois
1725 Oak Street
Champaign, Champaign County, Illinois

CLIENT / CONTACT

CLAYCO Corporation
35 East Wacker Drive
Suite 1300
Chicago, Illinois

OWNER

University of Illinois



GEOCON served as the geotechnical and construction inspection service consultants for this two story 90,000-square-foot state-of-the-art computing facility, which provides a secure and efficient operating environment for the fastest computer in the world, known as Blue Waters. The Petascale Computing Facility accommodates 10,000 square feet of office space for more than 50 staff members and includes command and system administration centers. It also features a 20,000-square-foot machine room with a six-foot raised floor large enough to house Blue Waters and other systems, as well as provide space for future growth of the technology infrastructure. In addition to the Petascale building, a new 1 million gallon chilled water tank was constructed on an adjacent site in order to accommodate the liquid cooling demand of the Blue Waters supercomputer.

Prior to construction, GEOCON provided geotechnical engineering services for this project, which included 12 soil borings to depths ranging from 50 to 95 feet. Flat-dilatometer testing was performed in several borings to develop settlement and seismic design parameters for use in a geotechnical engineering evaluation report. During construction, GEOCON provided construction inspection services on a full-time basis.

Partial Listing of Services Provided:

- Subgrade strength testing
- Proofroll tests
- Soil and aggregate compaction testing
- Rebar inspections
- Weld and bolted connections inspections
- Fresh concrete testing and monitoring
- Compressive strength testing
- Floor flatness testing / levelness