

Geotechnical Investigation for Proposed Nuclear Power Plant

Client:

Paul C. Rizzo
Associates, Inc.

Location:

Eastern Europe

Service Provided:

Geotechnical lab testing with rigorous timeline and strict quality requirements of ASME's NQA-1 quality requirements

Value Provided:

- Previous nuclear related project experience and robust quality system allowed our laboratory to be quickly approved for testing on the project
- One of the only laboratories in the world capable of performing the quantity and type of testing (index, strength and dynamic) required in such a short timeframe
- Fast turnaround, high quality testing and experienced staff helped our client meet its report submission commitment

Background & Project Challenges

The nuclear power plant is proposed to be built at the site of a previously closed plant shut down in the late 2000's. The capacity of the proposed power plant could be up to 3,400 megawatts and it would likely consist of two reactors.

Depending on the choice of reactor, the power plant would be built by 2018 – 2020.



GeoTesting Role & Accomplishments

GeoTesting Express (GTX) supported Paul C. Rizzo Associates, Inc. (Rizzo) by performing geotechnical laboratory testing. Testing was performed to help characterize the stability of subsurface materials that could affect structures at the site under static, dynamic and existing conditions. GTX was originally contracted to perform cyclic triaxial testing but our ability to process and test a vast amount of samples in a short period of time caused our scope to expand considerably. GTX provided rapid turnaround of nearly 400 tube samples. The testing program included hundreds of soil index tests (grain size analysis, Atterberg limits, specific gravity and classification), dozens of permeability tests and over 65 incremental consolidation tests. In addition, we performed hundreds of strength and dynamic tests including 160 unconfined compressions, 250 CU triaxial shear tests with pore pressure measurements and 33 cyclic triaxial tests.

Given that the project was located in Europe, GTX was able to adapt testing processes, equipment and software to comply with ISO testing standards. Procedures for the testing program were developed and approved prior to commencing work. Our laboratory underwent a series of audits (pre- and mid-testing) which examined both our testing processes and our quality system.

On multiple occasions, GTX was asked to perform additional testing for this project on a quick turnaround basis due to our ability to provide testing quickly. Since the products division of our company manufactures fully automated laboratory test equipment, we were able to add extra equipment quickly to handle the testing we were asked to perform. Because GTX maintains a foreign soil entry permit with the United States Department of Agriculture, we were able to receive samples from outside of the U.S. without delay and without subjecting samples to unnecessary treatment at the border.

For More Information Contact:

Gary T. Torosian Director of Testing Services
125 Nagog Park t 978.635.0424
Acton, MA 01720 f 978.635.0266
gtt@geotesting.com