

Laboratory Certification For

GeoTest Geotechnical & Construction Material Testing Laboratory

Lab ID: LCP-025

Issue date: Sept 28, 2016

Expiry date: March 30, 2017

This letter confirms the completion of inspection and certification for GeoTest Geotechnical & CMT Laboratory, which is located at Street 2, Near to Noorin TV, Dehberi, Kabul, Afghanistan. This laboratory should now be considered as certified for use by the US Army Corps of Engineers Transatlantic Afghanistan District (USACE TAA) and other clients, for all tests listed in Table 1 to Table 5, as attached to this letter. This certification will be included with records that are maintained at the ABA and USACE TAA Headquarters in Bagram Airbase, Afghanistan. Retaining the certification will require yearly inspections by the ABA. This certification is also contingent upon the following conditions:

- A. Continued employment of the following individuals while without their oversight, the laboratory will require recertification:
 1. Ahmad Shahpoor laboratory manager; and
 2. Other Senior Technicians who were inspected and certified during the inspection, a list of certified technicians can be provided upon request;
- B. If the calibration certificates of equipments expire or become invalid as per the relevant ASTM or AASHTO standard;
- C. If the laboratory is moved to a new location, it will require recertification; and
- D. If the laboratory fails to comply by the approved lab quality management plan, safety standards, and other criteria set forth in the most up-to-date ABA lab certification manual, the lab certification may be suspended.

For verification and good standing of this certification please check our online directory of laboratories at <http://aba.af/Lab-certification-program.html> . The inspection and certification process for the GeoTest lab adhered to procedures outlined by the Materials Testing Center (MTC), which is located at the Geotechnical and Structures Laboratory (GSL), U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi, USA. The MTC is the USACE-authorized agency for certifying laboratories for use in quality control testing for USACE construction projects. To facilitate construction in Afghanistan, the USACE TAA has authorized the ABA to conduct laboratory certifications with strict adherence to MTC protocol. Qualifications of the authors for conducting these certifications include: 12 years of laboratory experience, 12 years of teaching classes on construction materials, and six years of teaching university-level construction classes.

Regards,

Naeem Yassin

President of Afghanistan Builders Association
(ABA)



GeoTest Geotechnical & CMT Certified Laboratory Tests

Table 1. List of Certified Soil Tests for GeoTest

No	Test Method	Test Procedure Title
1	ASTM D 422	Standard Test Method for Particle Size Analysis of Soils
2	ASTM D 0854	Standard Test Methods for Specific Gravity of Soil Solids by Water Pycnometer
3	ASTM D 4643	Moisture Content of Soil
4	ASTM D 4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
5	ASTM D 0558	Standard Test Methods for Moisture –Density (Unit Weight) Relations of Soil-Cement Mixtures
6	ASTM D 1883	Standard Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils
7	ASTM D 1556 (AASHTO T-191)	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
8	ASTM D 2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
9	ASTM D 3080	Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions (No Calibration Certificate)
10		Percolation Test

Table 2. List of Certified Aggregate (Fine and Coarse) Tests for GeoTest

No	Test Method	Test Procedure Title
1	ASTM D 422	Sieve Analysis of Fine Aggregate and Fineness Modulus
2	ASTM C 142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
3	ASTM C 127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
4	ASTM C 29	Standard Test Method for Unit Weight and Voids in Aggregate
5	ASTM C 88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
6	ASTM C 131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
7	ASTM D 4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
8	CRD C 171	Standard Test Method for Determining Percentage of Crushed Particles in Aggregate

Table 3. List of Certified Cement, Grout, Mortar, & Concrete Tests for GeoTest

No	Test Method	Test Procedure Title
1	ASTM C 109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
2	ASTM C 184	Standard Test Method for Fineness of Hydraulic Cement by # 100 and #200 Sieves
3	ASTM C 430	Standard Test Method for Fineness of Hydraulic Cement by the 45- μ m (No. 325) Sieve
4	ASTM C 191	Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
5	ASTM C 192	Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
6	ASTM C 172	Standard Practice for Sampling Freshly Mixed Concrete
7	ASTM C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
8	ASTM C 143	Standard Test Method for Slump of Hydraulic-Cement Concrete
9	ASTM C 231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
10	ASTM C 138	Standard Test Method for Unit Weight of Freshly Mixed Concrete
11	ASTM C 39 ASTM C 109	Standard Test Method for Compressive Strength of Cubical, Cylindrical, CMU Concrete Specimens
12	ASTM C 42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
13	ACI 211/308/318	Concrete Mix Design as per ACI 211/308/318 including quality tests for cement and aggregate
14	ASTM C 805	Standard Test Method for Rebound Number of Hardened Concrete

Table 4. List of Certified Asphalt Cement and Asphalt Concrete Tests for GeoTest

No	Test Method	Test Procedure Title
1	ASTM D 979	Standard Practice for Sampling Bituminous Paving Mixtures
2	AASHTO T 79	Standard Method of Test for Flash Point with Tag Open-Cup Apparatus
3	ASTM D 36	Standard Test Method for Softening Point
4	ASTM D 5	Standard Test Method for Penetration of Bituminous Materials
5	ASTM D 3549	Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixtures Specimens
6	AASHTO 209	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

No	Test Method	Test Procedure Title
7	CRD C 649	Standard Test Method for Unit Weight, Marshall Stability, and Flow of Bituminous Mixtures
8	ASTM D 6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
9	ASTM D 2172	Standard Test Methods for Quantitative Extraction
10	ASTM D 2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
11	ASTM D 2027 or AASHTO M 82	Standard Specification for Cutback Asphalt (Medium-Curing Type)
12	ASTM D 977	Standard Specification for Emulsified Asphalt

Table 5. List of Certified Masonry Units, Bricks & Wood Tests for GeoTest

No	Test Method	Test Procedure Title
1	ASTM C 1314	Standard Test Method for Compressive Strength of Bricks, Sampling of Bricks, Water Absorption of Bricks