

Laboratory Certification For

Accurate Geotechnical Construction Material Company (AGCMTL)

Lab ID: LCP-035

Issue date: April 4th, 2019

Expiry date: March 31st, 2020

This letter confirms the completion of inspection and certification for the AGCMTL, which is located at House # 2, Street # 1, Kart-e-3, Dar-Ul-Aman Road, Kabul, Afghanistan. This laboratory should now be considered as **Certified for a period of 12-months** from the date of this letter. 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 4, 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 below individual while without his oversight, the laboratory will require recertification:
 - a. Mr. Sardar Khan the laboratory manager;
- B. If the calibration certificates of equipment expire or become invalid as per the relevant 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/lcp_directory.php. The inspection and certification process for AGCMTL 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.

Certified to perform 57 tests, as shown on attached sheets and summarized as:

Table 1: 12

Table 2: 11

Table 3: 18

Table 4: 16

Regards,



Farhads Mirza
ABA-Laboratory Certification Program Manager
200 (ABA-LCP)



AGCMTL Certified Laboratory Tests

Table 1. List of Certified Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D422	Standard Test Method for Particle Size Analysis of Soils
2	ASTM D854	Standard Test Methods for Amount of Material in Soil Solids by Water Pycnometer
3	ASTM D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
4	ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
5	ASTM D698	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 KN-m/m ³))
6	ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
7	ASTM D1883	Standard Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils
8	ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
9	ASTM D1586	Standard Test Method for Standard Penetration Test and Split Barrel Sampling of Soils
10	ASTM D2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
11	ASTM D4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
12	ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)

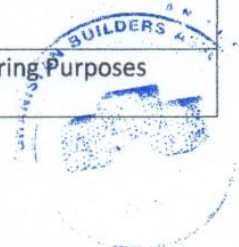


Table 2. List of Certified Aggregate (Fine and Coarse) Tests

No	Test Method	Test Procedure Title
1	ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
2	ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
3	ASTM C127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
4	ASTM C128	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
5	ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
6	ASTM C29	Standard Test Method for Unit Weight and Voids in Aggregate
7	ASTM C535	Standard Test Method for Resistance to Large Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
8	ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size in the Los Angeles Machine
9	ASTM D4791	Flakiness and Elongation
10	ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
11	ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates

Table 3. List of Certified Cement, Mortar, CMU, Concrete & Brick Tests

No	Test Method	Test Procedure Title
1	ASTM C187	Normal Consistency of Hydraulic Cement
2	ASTM C451	Standard Test Method for Early Stiffening of Hydraulic Cement (Paste Method)
3	ASTM C191	Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
4	ASTM C204	Standard Test Methods for fineness of Hydraulic Cement by Air-Permeability Apparatus
5	ASTM C430	Standard Test Method for Fineness of Hydraulic Cement by the 45- μ m (No. 325) Sieve
6	ASTM C188	Standard Test Method for Density of Hydraulic Cement
7	ASTM C109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
8	ASTM C1437	Standard Test Method for Flow of Hydraulic Cement Mortar
9	ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
10	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete
11	ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete

No	Test Method	Test Procedure Title
12	ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
13	ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
14	ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
15	ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
16	ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
17	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
18	ASTM C67	Standard Test Methods for Sampling and Testing Brick

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

No	Test Method	Test Procedure Title
1	ASTM D140	Standard Practice for Sampling Bituminous Materials
2	ASTM D5	Standard Test Method for Penetration of Bituminous Materials
3	ASTM D36	Standard Test Method for Softening Point of Bitumen (Ring-and Ball Apparatus)
4	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D70	Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)
6	ASTM D2042	Standard Test Method for Solubility of Asphalt Materials in Trichloroethylene
7	ASTM D402	Standard Test Method for Distillation of Cutback Asphaltic (Bituminous) Products
8	AASHTO T102	Standard Method of Test for Spot Test of Asphaltic Material
9	ASTM D979	Standard Practice for Sampling Bituminous Paving Mixtures
10	ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
11	ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
12	ASTM D6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
13	ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
14	ASTM D2172	Standard Test Methods for Quantitative Extraction
15	ASTM D5361	Standard Practice for Sampling Compacted Bituminous Mixtures for Laboratory Testing
16	ASTM D2489	Standard Practice for Estimating Degree of Particle Coating of Bituminous- Aggregate Mixtures1