

USACE-Certified Laboratory

Delta Afghan Technical Engineering Services (DATES)

Lab ID: LCP-026

Issue date: Jan 14th, 2021

Expiry date: Jan 13th, 2022

This letter confirms the completion of inspection and certification for the DATES, which is located on Darulaman Road, Se Rahi Alauddin, Opposite Isteqlal Hospital, Kabul, Afghanistan. This laboratory shall now be considered as **USACE-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 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 below individual while without his oversight, the laboratory will require recertification:
 - a. Mr. Akbar Ali 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.

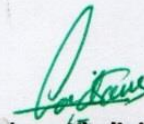
For verification and good standing of this certification please check our online directory of laboratories at http://aba.af/lcp_directory.php. The inspection and certification process for DATES adhered to procedures outlined by the Materials Testing Center (MTC), which is located at the Geotechnical 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 75 tests, as shown on attached sheets and summarized as:

Table 1: 17
Table 2: 15
Table 3: 20
Table 4: 19
Table 5: 4



Regards,



Ferdaws Khaliqi, PMP

**ABA-Laboratory Certification Program Manager
(ABA-LCP)**

DATES 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 D558	Standard Test Method for Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures
3	ASTM D698	Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 KN-m/m ³))
4	ASTM D854	Standard Test Methods for Amount of Material in Soil Solids by Water Pycnometer
5	ASTM D1140	Standard Test Methods for Amount of Material in Soils Finer than No. 200(75-75 μm) Sieve
6	ASTM D1195	Standard Test Method for Repetitive Static Plate Load Test of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
7	ASTM D1196	Standard Test Method for Non Repetitive Static Plate Load Test of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
8	ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
9	ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
10	ASTM D1586	Standard Test Method for Standard Penetration Test and Split Barrel Sampling of Soils
11	ASTM D1883	Standard Test Method for CBR (California Bearing Ratio) of Laboratory-Compacted Soils
12	ASTM D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
13	ASTM D2435	Standard Test Method for One Dimensional Consolidation Properties of Soils Using Incremental Loading
14	ASTM D3080	Standard Test Method for Direct Shear Test of Soil Under Consolidated Drained Conditions
15	ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
16	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Gas Pressure Tester
17	ASTM D6951	Standard Test Method for Use of the Dynamic Cone Penetration in Shallow Pavement Applications

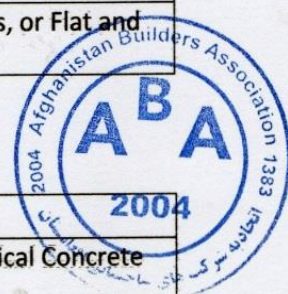


Table 2. List of Certified Aggregate (Fine and Coarse) Tests

No	Test Method	Test Procedure Title
1	ASTM C29	Standard Test Method for Unit Weight and Voids in Aggregate
2	ASTM C70	Test Method for Surface Moisture in Fine Aggregate
3	ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
4	ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
5	ASTM C127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
6	ASTM C128	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
7	ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size in the Los Angeles Machine
8	ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
9	ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
10	ASTM C535	Standard Test Method for Resistance to Large Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
11	ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
12	ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregate (Mortar Method)
13	ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
14	ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
15	ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

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

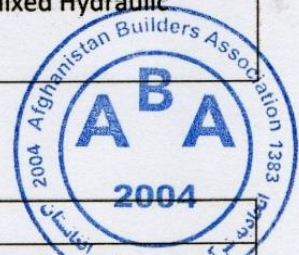
No	Test Method	Test Procedure Title
1	ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
2	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sewed Beams of Concrete
3	ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
4	ASTM C109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
5	ASTM C116	Test Method for Compressive Strength of Concrete Using Portions of Beams Broken in Flexure
6	ASTM C140	Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units



No	Test Method	Test Procedure Title
7	ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
8	ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
9	ASTM C187	Normal Consistency of Hydraulic Cement
10	ASTM C188	Standard Test Method for Density of Hydraulic Cement
11	ASTM C191	Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle
12	ASTM C204	Standard Test Methods for fineness of Hydraulic Cement by Air-Permeability Apparatus
13	ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
14	ASTM C293	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)
15	ASTM C305	Standard Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
16	ASTM C451	Standard Test Method for Early Stiffening of Hydraulic Cement (Paste Method)
17	ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
18	ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
19	ASTM C1019	Standard Test Method for Sampling and Testing Grout (Prisms)
20	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete

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

No	Test Method	Test Procedure Title
1	ASTM D5	Standard Test Method for Penetration of Bituminous Materials
2	ASTM D36	Standard Test Method for Softening Point of Bitumen (Ring-and Ball Apparatus)
3	ASTM D70	Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)
4	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D113	Standard Test Method for Ductility of Bituminous Materials
6	AASHTO T182	Standard Test Method for coating and Stripping of Bituminous Aggregate Mixtures
7	AASHTO T230	Standard Method of Test for Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures
8	ASTM D1188	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
9	ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures



No	Test Method	Test Procedure Title
10	ASTM D2170	Standard Test Method for Kinematic Viscosity of Asphalt (Bitumen)
11	ASTM D2171	Standard Test Method for Viscosity of Asphalt by Vacuum Capillary Viscometer
12	ASTM D2172	Standard Test Methods for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
13	ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
14	ASTM D2782	Effect of Heat and Air on a Moving Film of Asphalt
15	ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
16	ASTM D3549	Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixtures Specimens
17	ASTM D4867	Effect of Moisture on Asphalt Concrete Paving Mixture
18	ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
19	ASTM D6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures

Table 5. List of Certified Rock, Stone & Bricks Tests

No	Test Method	Test Procedure Title
1	ASTM C67	Standard Test Methods for Sampling and Testing Brick
2	ASTM C97	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone
3	ASTM C170	Standard Test Method for Compressive Strength of Dimension Stone
4	ASTM D5731	Standard Test Method for Determination of the Point Load Index of Rock

