

Laboratory Certification For

Delta Afghan Technical Engineering Services (DATES)

Lab ID: LCP-026

Issue date: Jan 6th, 2019

Expiry date: July 5th, 2019

This letter confirms the completion of inspection and certification for DATES, which is located at Darulaman Road, Serahi Alauddin, Opposite Isteqlal Hospital, Kabul, Afghanistan. This laboratory should now be considered as **Certified for a period of 6-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. The following tests (**ASTM D2435, ASTM D3080, ASTM C109, and ASTM C191**) are **not permitted under this period of Certification**. 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 the 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 80 tests, as shown on attached sheets and summarized as:

Table 1: 17

Table 2: 15

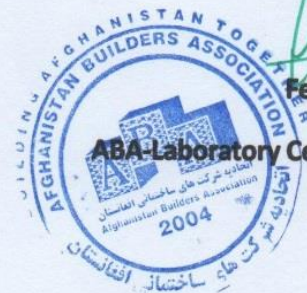
Table 3: 25

Table 4: 20

Table 5: 3

Regards,

Ferdaws Mirza



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 D6938	Standard Test Method for In-Place Density and Water Content of Soils and Soil-Aggregate by Nuclear Methods (Shallow Depth)
2	ASTM D422	Standard Test Method for Particle Size Analysis of Soils
3	ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
4	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture Content) of Soil by the Calcium Gas Pressure Tester
5	ASTM D1883	Standard Test Method for CBR (California Bearing Ratio) of Laboratory Compacted Soils
6	ASTM D4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
7	ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
8	ASTM D698	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 KN-m/m ³))
9	ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
10	ASTM D558	Standard Test Methods for Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures
11	ASTM D1140	Standard Test Methods for Amount of Material in Soils Finer than No. 200(75-75 μm) S
12	ASTM D854	Standard Test Methods for Amount of Material in Soil Solids by Water Pycnometer
13	ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
14	ASTM D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
15	ASTM D6951	Standard Test Method for Use of the Dynamic Cone Penetration in Shallow Pavement Applications
16	ASTM D1586	Standard Test Method for Standard Penetration Test and Split Barrel Sampling of Soils
17	ASTM D2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil

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 C127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
5	ASTM C128	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
6	ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size in the Los Angeles Machine
7	ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
8	ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
9	ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse 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	Flakiness and Elongation

Table 3. List of Certified Cement, Grout, Mortar, & Concrete 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 C188	Standard Test Method for Density of Hydraulic Cement
4	ASTM C204	Standard Test Methods for fineness of Hydraulic Cement by Air-Permeability Apparatus
5	ASTM C305	Standard Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
6	ASTM C189	Standard Test Method for Soundness of Hydraulic Cement
7	ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
8	ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field

No	Test Method	Test Procedure Title
9	ASTM C192	Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
10	ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
11	ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
12	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sewed Beams of Concrete
13	ASTM C116	Test Method for Compressive Strength of Concrete Using Portions of Beams Broken in Flexure
14	ASTM C78	Standard Test Method for Flexural Strength of Concrete(Using Simple Beam with Third-Point Loading)
15	ASTM C293	Standard Test Method for Flexural Strength of Concrete(Using Simple Beam with Center-Point Loading)
16	ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
17	ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
18	ASTM C233	Test Method for Air-Entraining Admixtures for Concrete
19	ASTM C617	Standard Practice for Capping Cylindrical Concrete Specimens
20	ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
21	ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
22	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete
23	ASTM C1019	Standard Test Method for Sampling and Testing Grout (Prisms)
24	ASTM C140	Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
25	ASTM C1552	Standard Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compressive Testing

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

No	Test Method	Test Procedure Title
1	ASTM D979	Standard Practice for Sampling Bituminous Paving Mixtures
2	ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
3	ASTM D2172	Standard Test Methods for Quantitative Extraction
4	ASTM D6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
5	ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
6	ASTM D1188	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
7	ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
8	ASTM D5361	Standard Practice for Sampling compacted Bituminous Mixtures for Laboratory Testing
9	ASTM D2489	Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures
10	ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
11	ASTM D3549	Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixtures Specimens
12	ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
13	AASHTO T182	Standard Test Method for coating and Stripping of Bituminous Aggregate Mixtures
14	AASHTO T230	Standard Method of Test for Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures
15	ASTM D140	Standard Practice for Sampling Bituminous Materials
16	ASTM D113	Standard Test Method for Ductility of Bituminous Materials
17	ASTM D36	Standard Test Method for Softening Point of Bitumen (Ring-and Ball Apparatus)
18	ASTM D5	Standard Test Method for Penetration of Bituminous Materials
19	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
20	ASTM D70	Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)

Table 5. List of Certified Stone & Bricks Tests

No	Test Method	Test Procedure Title
1	ASTM C67	Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
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