

USACE-Certified Laboratory

HASK Engineering Services Laboratory

Lab ID: LCP-009

Issue date: Oct 1st, 2020

Expiry date: Sept 30th, 2021

This letter confirms the completion of inspection and certification for the HASK, which is located on Street No- 4, Taimani Project, Near Salim Karwan Square, Kabul, Afghanistan. This laboratory should 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. Shekarandoi Jalal the laboratory manager;
- B. If the calibration certificates of equipments 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 HASK 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 84 tests, as shown on attached sheets and summarized as:

Table 1: 16

Table 2: 20

Table 3: 19

Table 4: 23

Table 5: 6

Regards,



Ferdaws Mirza

ABA-Laboratory Certification Program Manager
(ABA-LCP)

HASK Certified Laboratory Tests

Table 1. List of Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D421	Dry Preparation for Particle Size Distribution & Soil Constants
2	ASTM D698	Compaction Characteristics by Standard Effort
3	ASTM D854	Specific Gravity of Soils
4	ASTM D1140	Material Finer than 75 mm (No. 200) Sieve
5	ASTM D1556	Density & Unit Weight by Sand Cone
6	ASTM D1557	Compaction Characteristics by Modified Effort
7	ASTM D1883	California Bearing Ratio (CBR)
8	ASTM D2216	Water Content
9	ASTM D2487	Classification of Soils
10	ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purpose
11	ASTM D4318	Liquid & Plastic Limits & Plasticity Index
12	ASTM D4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
13	AASHTO T93	Standard Method of Test for Determining the Field Moisture Equivalent of Soils
14	AASHTO T224	Correction for Coarse Particles in the Soil Compaction Test
15	ASTM D422	Standard Test Method for Particle-Size Analysis of Soil
16	ASTM D1586	Penetration Test and Split-Barrel Sampling of Soils

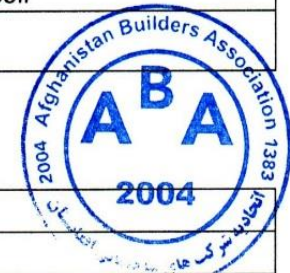


Table 2. List of Aggregate (Fine and Course) Tests

No	Test Method	Test Procedure Title
1	ASTM C29	Unit Weight and Voids in Aggregate
2	ASTM C40	Organic Impurities in Fine Aggregate for Concrete
3	ASTM C70	Surface Moisture in Fine Aggregate
4	ASTM C87	Effect of Organic Impurities in Fine Aggregate on Strength of Mortar
5	ASTM C88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
6	ASTM C117	Material Finer than 75 μ m (No. 200) Sieve
7	ASTM C123	Light Weight Particles in Aggregate
8	ASTM C127	Specific Gravity & Absorption in Coarse Aggregate
9	ASTM C128	Specific Gravity & Absorption in Fine Aggregate
10	ASTM C131	Los Angeles Abrasion Resistance on Small-Size Coarse Aggregate
11	ASTM C136	Sieve Analysis of Aggregates
12	ASTM C142	Clay Lumps
13	ASTM C566	Total Moisture Content
14	ASTM C702	Reducing Samples to Testing Size
15	ASTM D75	Standard Practice for Sampling Aggregate
16	ASTM D2419	Sand Equivalent Value

No	Test Method	Test Procedure Title
17	ASTM D4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
18	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by The Calcium Carbide Gas Pressure Tester
19	ASTM D5821	Percentage of Fractured Particles in Coarse Aggregate
20	CRD-C 171	Percentage of Crushed Particles in Aggregate

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

No	Test Method	Test Procedure Title
1	ASTM C31	Making and Curing Test Specimens in the Field
2	ASTM C39	Compressive Strength of Cylindrical Specimens
3	ASTM C42	Obtaining and Testing Drilled Cores and Sewed Beams of Concrete
4	ASTM C109	Compressive Strength of Hydraulic Cement Mortars
5	ASTM C143	Slump of Hydraulic-Cement Concrete
6	ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
7	ASTM C174	Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
8	ASTM C185	Standard Test Method of Air Content of Hydraulic Cement Mortar
9	ASTM C187	Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
10	ASTM C191	Standard Test Method for Time Setting of Hydraulic Cement by Vicat Needle
11	ASTM C192	Making and Curing Test Specimens in Laboratory
12	ASTM C231	Standard Test Methods for Air Content of Freshly Mixed Concrete by the Pressure Method
13	ASTM C451	Early Stiffening of Hydraulic Cement (Paste Method)
14	ASTM C617	Capping Cylindrical Specimens
15	ASTM C642	Density, Absorption, and Voids in Hardened Concrete
16	ASTM C805	Rebound Number of Hardened Concrete
17	ASTM C1019	Standard Test Method for Sampling and Testing Grout
18	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
19	ASTM C1231	Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders

Table 4. List of 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	Softening Point
3	ASTM D70	Specific Gravity & Density
4	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D113	Ductility of Bituminous Materials



6	ASTM D140	Sampling Bituminous Materials
7	ASTM D546	Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures
8	ASTM D979	Sampling Bituminous Paving Mixtures
9	ASTM D2172	Quantitative Extraction
10	ASTM D2489	Estimating Degree of Particle Coating of Bituminous Aggregate Mixtures
11	ASTM D2726	Bulk Specific Gravity and Density
12	ASTM D3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
13	ASTM D3549	Thickness or Height of Compacted Bituminous Paving Mixtures Specimens
14	ASTM D5361	Sampling Compacted Bituminous Mixtures for Laboratory Testing
15	ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
16	ASTM D6926	Preparation of Bituminous Specimens Using Marshall Apparatus
17	ASTM D6927	Marshall Stability and Flow of Bituminous Mixtures
18	CRD-C 649	Unit Weight, Marshall Stability, and Flow of Bituminous Paving Mixtures
19	CRD-C 650	Density and Percent Voids of Compacted Bituminous Paving Mixtures
20	CRD-C 652	Measurement of Reduction in Marshall Stability of Bituminous Mixtures Caused by Immersion in Water
21	AASHTO T79	Flash Point with Tag Open-Cup Apparatus for use with Material having a Flash less than 93.3°C (200°F)
22	AASHTO T182	Coating and Stripping of Bitumen-Aggregate Mixtures
23	AASHTO T230	Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures

Table 5. List of Bricks, Stone, & CMU's Tests

No	Test Method	Test Procedure Title
1	ASTM C67	Sampling and Testing Bricks and Structural Clay Tile
2	ASTM C90	Standard Specification for loadbearing Concrete Masonry Unit
3	ASTM C97	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone
4	ASTM C140	Sampling and Testing Concrete Masonry and Related Units
5	ASTM C170	Compressive Strength of Dimension Stone
6	ASTM C1552	Capping CMU/Related Units/Masonry Prisms for Compression Testing

