Laboratory Certification For

VICC CMT & WATER LABORATORIES

Lab ID: LCP-010

Issue date: Feb 18, 2016
Expiry date: Feb 17, 2017

This letter confirms the completion of inspection and certification for the VICC, which is located at Spin Ghar Road, District 9, Hod Khail, Pol-e- Charkhi, 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 7, 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. Noorullah Mashwani the laboratory manager;
   2. Other 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/lcp.html. The inspection and certification process for the SSCL 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)

VICC CMT & WATER Laboratories Certified Laboratory Tests

Table 1. List of Certified Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D 421	Dry Preparation for Particle Size Distribution & Soil Constants
2	ASTM D 422	Particle Size Analysis
3	ASTM D 698	Compaction Characteristics by Standard Effort
4	ASTM D 854	Specific Gravity of Soils
5	ASTM D 1140	Material Finer than 75 mm (No. 200) Sieve
6	ASTM D 1556	Density & Unit Weight by Sand Cone
7	ASTM D 1557	Compaction Characteristics by Modified Effort
8	ASTM D 1883	California Bearing Ratio (CBR)
9	ASTM D 2487	Classification of Soils
10	ASTM D 2922	Density of Soil and Soil-Aggregate in Place by Nuclear method (Shallow Depth)
11	ASTM D 3017	Water Content of Soil and Rock in Place by Nuclear Method (Shallow Depth
12	ASTM D 3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purpose
13	ASTM D 3740	Minimum Requirements for Agencies Engaged in the Testing and / or Inspection of Soil and Rock as Used in Engineering Design and Construction
14	ASTM D 4318	Liquid & Plastic Limits & Plasticity Index
15	ASTM D 4643	Determination of Water Content of Soil by Microwave Oven
16	ASTM D 4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
17	ASTM D 6951	Standard Test Method for Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications
18	AASHTO T 93	Standard Method of Test for Determining the Field Moisture Equivalent of Soils
19	AASHTO T 224	Correction for Coarse Particles in the Soil Compaction Test
20	CRD-C 654	Standard Test Method for Determination the California Bearing Ratio of Soils (Field Test)

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

No	Test Method	Test Procedure Title
1	ASTM C 29	Unit Weight and Voids in Aggregate
2	ASTM C 40	Organic Impurities in Fine Aggregates for Concrete
3	ASTM C 70	Surface Moisture in Fine Aggregate
4	ATSM C 88	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
5	ASTM C 117	Material Finer than 75 μm (No. 200) Sieve
6	ASTM C 127	Specific Gravity & Absorption in Coarse Aggregate

No	Test Method	Test Procedure Title
7	ASTM C 128	Specific Gravity & Absorption in Fine Aggregate
8	ASTM C 131	Los Angeles Abrasion Resistance on Small-Size Coarse Aggregate
9	ASTM C 136	Sieve Analysis of Aggregates
10	ASTM C 142	Clay Lumps
12	ASTM C 535	Los Angeles Abrasion Resistance on Large Size Coarse Aggregate
13	ASTM C 566	Total Moisture Content
14	ASTM C 702	Reducing Samples to Testing Size
15	ASTM C 1252	Un compacted Void Content
16	ASTM D 75	Standard Practice for Sampling Aggregate
17	ASTM D 2419	Sand Equivalent Value
18	ASTM D 4791	Flat or Elongated Particles
19	ASTM D 4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by The Calcium Carbide Gas Pressure Tester
20	ASTM D 5821	Percentage of Fractured Particles in Coarse Aggregate
21	CRD-C 171	Percentage of Crushed Particles in Aggregate
22	BS 812 Section 105.1 and Section 105.2	Testing Aggregates. Methods for Determination of Particle Shape Flakiness Index and Elongation Index for Coarse Aggregate.

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

No	Test Method	Test Procedure Title
1	ASTM C 31	Making and Curing Test Specimens in the Field
2	ASTM C 39	Compressive Strength of Cylindrical Specimens
3	ASTM C 42	Obtaining and Testing Drilled Cores and Sewed Beams of Concrete
4	ASTM C 109	Compressive Strength of Hydraulic Cement Mortars
5	ASTM C 114	Chemical Analysis of Hydraulic Cement
6	ASTM C 143	Slump of Hydraulic –Cement Concrete
7	ASTM C 151	Autoclave Expansion of Hydraulic Cement
8	ASTM C 172	Standard Practice for Sampling Freshly Mixed Concrete
9	ASTM C 174	Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
10	ASCTM C 187	Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
11	ASCTM C 188	Standard Test Method for Density of Hydraulic Cement
12	ASCTM C 191	Standard Test Method for Time Setting of Hydraulic Cement by Vicat Needle
13	ASTM C 192	Making and Curing Test Specimens in Laboratory
14	ASTM C 204	Standard Test Methods for Fineness of Hydraulic Cement by Air- Permeability Apparatus

No	Test Method	Test Procedure Title
15	ASTM C 231	Standard Test Methods for Air Content of Freshly Mixed Concrete by the Pressure Method
16	ASTM C 232	Bleeding of Concrete
17	ASTM C 270	Mortar for Unit Masonry
18	ASTM C 430	Fineness of Hydraulic Cement by the 45-um (No.325)
19	ASTM C 451	Early Stiffening of Hydraulic Cement (Paste Method)
20	ASTM C 470	Molds for Forming Concrete Test Cylinders Vertically
21	ASTM C 476	Standard Specification for Grout of Masonry
22	ASTM C 511	Moist Cabinets, Moist Rooms, Water Storage Tanks
23	ASTM C 617	Capping Cylindrical Specimens
24	ASTM C 642	Density, Absorption and Voids in Hardened Concrete
25	ASTM C 803	Penetration Resistance of Hardened Concrete
26	ASTM C 805	Rebound Number of Hardened Concrete
27	ASTM C 926	Standard Specification for Application of Portland Cement-Based Plaster
28	ASTM C 1019	Standard Test Method for Sampling and Testing Grout
29	ASTM C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
30	ASTM C 1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregate for Use In Construction and Criteria for Testing Agency Evaluation
31	ASTM C 1437	Standard Test Method for Flow of Hydraulic Cement Mortar
32	ASTM C 1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
33	ASHTO T 26	Quality of Water to be used in Concrete
34	CRDC 400	Requirements for Water for use in Mixing of Curing Concrete
35	MIS- 2703	Moisture Meter for (Monitoring Moisture in Plaster/Concrete)

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

No	Test Method	Test Procedure Title
1	ASTM D 5	Standard Test Method for Penetration of Bituminous Materials
2	ASTM D 36	Softening Point
3	ASTM D 70	Specific Gravity & Density
4	ASTM D 92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D 140	Sampling Bituminous Materials
6	ASTM D 242	Mineral Filler for Bituminous Paving Mixtures
7	ASTM D 546	Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures
8	ASTM D 979	Sampling Bituminous Paving Mixtures
9	ASTM D 2041	Theoretical Maximum Specific Gravity & Density (Rice)
10	ASTM D 2042	Solubility by Trichloroethylene
11	ASTM D 2172	Quantitative Extraction

No	Test Method	Test Procedure Title
12	ASTM D 2489	Estimating Degree of Particle Coating of Bituminous- Aggregate Mixtures
13	ASTM D 2726	Bulk Specific Gravity and Density
14	ATSM D 2872	Effect of Heat and Air on a Moving Film of Asphalt (Rolling Thin-Film Oven Test)
15	ASTM D 3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
16	ASTM D 3549	Thickness or Height of Compacted Bituminous Paving Mixtures Specimens
17	ASTM D 3665	Random Sampling of Construction Materials
18	ASTM D 3666	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
19	ASTM D 5361	Sampling Compacted Bituminous Mixtures for Laboratory Testing
20	ASTM D 5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
21	ASTM D 6926	Preparation of Bituminous Specimens Using Marshall Apparatus
21	ASTM D 6927	Marshall Stability and Flow of Bituminous Mixtures
22	CRD-C 649	Unit Weight, Marshall Stability, and Flow of Bituminous Mixtures
23	ASTM C 650	Standard Method for Density and Percent Voids of Compacted Bituminous Paving Mixtures
24	CRD-C 652	Standard Test Method for Measurement of Reduction in Marshall Stability of Bituminous Mixtures Caused by immersion in Water
25	AASHTO T 79	Flash Point with Tag Open-Cup Apparatus for Use with Material Having a Flash Less Than 93.3°c (200°F)
26	AASHTO T 102	Spot Test of Asphalt Materials
27	AASHTO T 182	Coating and Stripping of Bitumen-Aggregate Mixtures
28	AASHTO T 230	Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures
29	AASHTO T 283	Standard Method of Test for Resistance of Compacted Hot Mix Asphalt (HMA) to Moisture-Induced Damage

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

No	Test Method	Test Procedure Title
1	ASTM C 67	Sampling and Testing Brick and Structural Clay Tile
2	ASTM C 90	Standard Specification for loadbearing Concrete Masonry Unit
3	ASTM C 97	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone
4	ASTM C 140	Sampling and Testing Concrete Masonry and Related Units
5	ASTM C 170	Compressive Strength of Dimension Stone
6	ASTM C 1552	Capping CMU/Related Units/Masonry Prisms for Compression Testing

Table 6. List of Certified Advanced Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D 1195	Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
2	ASTM D 1196	Non repetitive Static Plate Load Tests of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
3	ASTM D 1586	Penetration Test and Split-Barrel Sampling of Soils

Table 7. List of Certified Steel Tests

No	Test Method	Test Procedure Title
1	ASTM A 370	Test Methods and Definitions for Mechanical Testing of Steel Products
2	ASTM A 615	Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
3	ASTM E 8	Tension Testing of Metallic Materials
4	AASHTO T 285	Bend Test for Bars for Concrete Reinforcement

Water: (See Lab for Details)