



Procedures for Upgrading the Certification of Concrete Laboratories

Background

Upgrading the certification of a concrete laboratory occurs when:

- i) a Category 0 laboratory applies for the flexural test option;
- ii) a laboratory applies for certification in a more advanced category, or
- iii) a Category 1 or Category 2 laboratory applies for certification of one or more additional tests not included in the current Laboratory Certificate

Requirements

The requirements for the equipment and record keeping are defined in CSA A283, CSA A23.2 and the CCIL Checklist.

The laboratory shall employ technicians qualified to execute all the test methods for which the laboratory is certified. The requirements for technicians are contained in the document 'Training and Certification of Concrete Technicians'.

Process

i) A Category 0 Laboratory Applies for the Flexural Test Option

Where a laboratory applies for certification in the flexural test option, one or more technicians who hold a valid CCIL Certified Field Testing Technician card shall pass the written and practical examinations for test method A23.2-3C (flexural test specimens). If a technician also completes the written and practical examinations for Category 0, a new field card will be issued valid for five years. If the technician completes only the examinations for test method A23.2-3C (flexural test specimens), the test method will be added to the current field card with no change in the expiry date.

In addition, one or more technicians shall pass the written and practical examinations for test method A23.2-8C.

The laboratory shall also satisfy the equipment, calibration and record-keeping requirements contained in CSA A23.2, CSA A283 and the CCIL Checklist.

ii) Category Upgrade

Where a laboratory applies for certification in a more advanced category, one or more technicians shall pass the **Laboratory Examination** for the new category. The technician shall also satisfy the CCIL Inspector that the technician has the practical competence to execute any of the test methods in the category. This shall be done through oral questions and demonstrations chosen by the CCIL Inspector. The laboratory shall have the option of having the technician who is currently certified as Category 0 or Category 1 examined only on the

category or categories for which the technician is not certified, in which case the expiry date of the technician's certification will not change. If the technician completes the written and practical examinations for the new category and all lower categories, his or her certification will be valid for five years. A technician holding a CCIL Certified Field Testing Technician card issued before January 1, 2018 (which includes test method CSA A23.2-9C) will be required to complete the Category 0 Laboratory Examination in addition to the examination for the new category.

In addition, one or more technicians holding a valid CCIL Certified Field Testing Technician card shall pass the written **Field Examination** for the appropriate category and demonstrate practical competence through oral questions and demonstrations chosen by the CCIL Inspector. The laboratory shall have the option of having the technician examined on the category or categories for which the technician is not certified, , in which case the expiry date of the card will not change. If the technician completes the written and practical examinations for the new category and all lower categories, a new card will be issued and be valid for five years.

The laboratory shall also satisfy the equipment, calibration and record-keeping requirements contained in CSA A23.2, CSA A283 and the CCIL Checklist.

iii) Additional Tests

Where a laboratory applies for additional tests, one or more technicians (though not necessarily the same person) shall pass the **Laboratory Examination** and demonstrate practical competence for each new additional laboratory test method. Laboratory test methods are considered to be CSA A23.2-9A, 14A, 16A & 17A, 23A, 24A, 25A, 26A, 29A, 1B¹, 2B, 3B, 4B, 6B (Procedure B)², 8B, 8C, 10C, 13C, 16C, 21C, 22C and 23C, ASTM C457 and C666.

Where the laboratory applies for certification in any of the field test methods, one or more technicians holding a valid CCIL Certified Field Testing Technician card (though not necessarily the same person) shall pass the **Field Examination** for the applicable test method and demonstrate practical competence to the satisfaction of the CCIL Inspector. The expiry date of the card will not change unless the technician also completes the written and practical examination for Category 0 or higher category. Field test methods are considered to be CSA A23.2-1B¹, 6B (Procedure A)², 3C (flexural test specimens), 7C, 15C and 20C.

The laboratory shall also satisfy the equipment, calibration and record-keeping requirements contained in CSA A23.2, CSA A283 and the CCIL Checklist.

Notes:

- (1) *Test method CSA A23.2-1B includes field activities (viscosity, expansion, bleeding and the moulding of compression specimens) and laboratory activities (curing and testing compression specimens). The relevant sections of the Laboratory and Field Examinations must be completed, though not necessarily by the same person.*
- (2) *Test method A23.2-6B includes a field test method (Procedure A) and a laboratory test method (Procedure B). A laboratory may apply for certification for Procedure A, Procedure B, or both procedures.*