



Canadian Council of Independent Laboratories
Conseil canadien des laboratoires indépendants

CCIL Information for New Concrete Laboratory Applicants

This document supplements the information contained in the document “CCIL Concrete Testing Laboratory Certification Program Description” and provides a more informal description of the certification process for new applicants considering certification of a concrete testing laboratory.

1 Overview

CCIL certifies concrete laboratories in accordance with the requirements of CSA Standard A283-24 “Certification of laboratories for concrete”.

The three categories: basic concrete, concrete aggregate and advanced concrete, otherwise identified as Types Q, R and S respectively, are defined in CSA A283-24. Laboratories may also apply to be certified to perform any of the additional tests listed in Clause 6.4 of A283-24 for the certification category selected.

2 Documents

The following documents are relevant to the certification process and are available on the CCIL website <http://ccil.com/certification/concrete-certification> :

- i. CCIL Concrete Testing Laboratory Certification Program Description;
- ii. CCIL Concrete Testing Technician Certification Program Description;
- iii. CCIL Certification Procedure for Granting and Amending Certification;
- iv. Letter of Undertaking (template)
- v. CCIL List of Certified Technicians (template)

The laboratory must purchase copies of CSA Standard A283-24 “Certification of laboratories for concrete”, CSA Standard A23.1-24 “Concrete materials and methods of concrete construction” and CSA Standard A23.2-24 “Test Methods and Standard Practices for concrete” and all ASTM Standards for which the laboratory is certified.

3 Application Process

The following steps are involved in completing an application:

- i. Register and create a password for the CCIL Portal
- ii. Provide the name and address of the laboratory and contact information for the supervising engineer and main contact person (commonly, but not necessarily, the laboratory supervisor).
- iii. Enter the Category of certification requested, and any additional tests (if applicable).
- iv. Upload the following required documents:
 - a) resume, cover letter documenting compliance with the Qualifications requirements (Clauses 5.2.1.3 and 5.2.2.3 of CSA Standard A283-24) and the engineering licence of the supervising engineer,
 - b) the organization chart (Clause 5.2.1.3 of CSA Standard A283-24),
 - c) the list of certified technicians currently employed by the laboratory (if applicable),
 - d) a Letter of Undertaking.
- v. The names of all Field Technicians and Laboratory Technicians, and the test methods for which certification is requested.

Upon receipt of the application, the laboratory will be contacted by CCIL to review the application and answer any questions relating to the certification process.

An invoice for the annual maintenance fee (used to cover the program overheads) will be issued. Upon receipt of payment, the laboratory will be contacted by a CCIL Inspector to arrange an audit

The CCIL Inspector will complete the CCIL Checklist and the CCIL Compliance Report at the time of their visit and also conduct the written and practical examinations of the technicians. The cost of the inspector's visit will be invoiced following completion of the audit.

4 Technicians

A Type Q laboratory must employ one or more Field Technicians, and one or more Laboratory Technicians certified for the test methods contained in Clause 6.1 of CSA A283-24. An individual can be certified as both a Field Technician and a Laboratory Technician.

For Type R and Type S laboratories, technicians shall be certified for test methods selected, at the discretion of the supervising engineer, from Clauses 6.2 and 6.4.2 or Clauses 6.3 and 6.4.3 respectively. The laboratory shall have one or more technicians certified for each test for which the laboratory is certified. A Type S laboratory must also be certified for Type Q and Type R.

Field Technicians must complete a written (closed book) examination and a practical (demonstration) examination. Laboratory Technicians must complete a written (open book) examination and a practical exam to demonstrate competence in the laboratory test methods. Details of the test methods included in each examination are given in the document “CCIL Concrete Testing Technician Certification Program Description”. Please note that the laboratory must submit a request through the CCIL portal to transfer a technician’s card issued in the name of another employer, or from another office, before the technician can be included in the laboratory’s organization chart.

Technicians passing the written and practical examinations are issued CCIL certification cards that are valid for a period of 5 years.

5 Inter-laboratory Correlation Test

In addition to the requirements contained in the CSA A283-24, there is a CCIL requirement for each new laboratory to participate in an inter-laboratory correlation of compressive strength testing of a minimum of twelve concrete cylinders, to ensure the acceptability of test results for compressive strength. Six cylinders must be cast and tested by technicians employed by the new laboratory and the results compared with those from six cylinders (from the same batch of concrete) cast and tested by technicians from a CCIL certified laboratory. The concrete shall be commercial ready-mixed concrete having a specified strength of not less than 25 MPa at 28 days. All testing is to be done in accordance with CSA test methods A23.2:24-1C, A23.2:24-3C and A23.2:24-9C, and the final report must include the test results reported by the two laboratories on each laboratory’s Concrete Test Report form.

It is preferable that the cylinders be tested at age 28 days, although results from cylinders tested at age 7 days will be accepted where the correlation testing is the only outstanding item in the certification process, and providing that the specified strength of the concrete is not less than 30 MPa at 28 days. Where cylinders are tested at age 7 days, all twelve cylinders must be tested at age 7 days.

6 Additional Information

A list of all CCIL-certified concrete laboratories is posted on the website at www.ccil.com.

Following certification, concrete testing laboratories are audited in accordance with the requirements of Clause 5.1.1.3 and Clause 8.3 of CSA A283-24.

For further information, please contact the CCIL Certification Office by phone at 289-337-8888 or by email to gkermath@ccil.com.