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LAB WATCH

SPECIAL REPORT

In representing the independent, private-sector testing laboratories in Canada, CCIL works with various government ministries and departments to ensure that consumers are protected, standards are met, and all publicly-funded projects realize value for money.

We are proud of our long history of working collaboratively with government. A good example of this is our partnership with the Ministry of Transportation of Ontario. CCIL has been a staunch advocate for enhancing MTO's quality assurance oversight on highway projects, and we were pleased with the Ministry's recently announced Action Plan in this regard.

This Action Plan introduces new initiatives aimed at strengthening independent testing and inspection. To keep our members informed, we sat down with Kevin Bentley, Executive Director and Chief Engineer of MTO's Provincial Highway Management Division, to discuss these important developments.



MTO's Kevin Bentley

LabWatch: The Action Plan says MTO will be strengthening the specifications for, and increasing inspections of asphalt. Can you provide details?

Kevin Bentley: For this construction season, a number of changes will be made to the specifications and contract requirements associated with asphalt:

- Extended Bending Beam Rheometer and Double Edge Notched Tension tests will now be required for all asphalt cement grades;
- End Result Specifications will be modified to suspend incentive payments for asphalt mix properties and compaction. The lower limit for asphalt compaction will also be raised;
- Requirements for pavement smoothness will be raised;
- Acceptable limit for the ash content test has been reduced consistent with other jurisdictions;
- Use of reclaimed asphalt has been suspended in surface course pavement where long lasting pavement is required; and
- Inspection requirements at asphalt plant have been strengthened.

These initiatives will be evaluated over the coming year and considered along with other ongoing work as we continually strive to improve asphalt quality through our testing regime and contract specifications.

LW: How will these changes impact laboratory testing?

KB: As a result of the Ministry's Action Plan the number of Extended Bending Beam Rheometer and Double Edge Notched Tension tests carried out at laboratories will increase. Prior to March 2017, these two tests were routinely carried out on all asphalt grades with the exception of PG 58-28 and 52-34 for which the testing was only undertaken as requested by the Ministry for information purposes. This testing will now be standard practice.

For PGXX-40 asphalt cement grades, laboratories are instructed to run the Double Edge Notched Tension laboratory testing procedure at 4°C rather than testing the samples at 15°C before dropping to 4°C.

LW: Going forward, will all construction materials testing be performed only by independent laboratories? Or will contractors continue to be allowed to conduct their own quality assurance testing under some circumstances (i.e. under warranty-based contracts)?

KB: Contractors remain responsible for their own quality control testing. Quality assurance testing for acceptance whether for a method specification or an end result warranty specification will typically be completed by independent laboratories working directly for the ministry.

LW: The Action Plan will require contractors to provide documentation from asphalt cement suppliers certifying that the material conforms to the Ministry's requirements. Will the suppliers be required to have their materials tested by an independent laboratory as part of this certification process?

KB: Our contracts require documentation from the asphalt cement (AC) supplier in the form of a bill of lading and certificate of analysis confirming the grade of PGAC.

The supplier's certificate of analysis is based on their own internal quality control testing, however the Ministry will still be carrying out independent quality assurance testing to verify that the asphalt cement meets our requirements.

We have also enhanced our oversight requirements for AC sampling during hot mix asphalt production and will be providing additional training to staff involved in these activities.

Contractors and their suppliers are expected to continue with their own quality control testing and monitoring procedures to ensure they are providing products conforming to the contract.



Credit: MTO

LW: MTO will be directly responsible for the care, control, and oversight of asphalt test samples in order to prevent switching. Will this change in any way how testing laboratories currently carry out their work?

KB: Beginning in late 2016, changes have been made to the sample delivery process associated with asphalt, concrete and aggregate materials. The Ministry or its agent is now responsible for the care and control of these samples from the construction site to the laboratory. This is not expected to impact how laboratories undertake their work.

Under the Ministry's new Web-Based Contract Management System (WBCMS) the quality assurance laboratory will now be able to log into the system and see what samples are being delivered.

LW: Under the Plan, there will be further training and improved guidelines for both Ministry and consultant staff involved in construction sampling and testing oversight. Will laboratory technicians/staff also have to be trained around these new requirements? What will be involved?

KB: As part of the Ministry's Action Plan there are a number of areas where training opportunities have been identified and will be provided to those involved in Ministry highway construction and oversight.

Revisions are also being made to the ministry's Construction Administration and Inspection Task Manual to address a number of items in the Action Plan.

LW: A new system for test results is now being rolled out. What do you hope to achieve with this new system?

KB: The Ministry's new Web-Based Contract Management System (WBCMS) will now place all testing information into a single database tracked by each contract. The Ministry will now have detailed information on the timing of sampling and testing as well as being able to track who has care and control of the sample.

As all information will now be in a single database, the Ministry will be able to identify trends and make enterprise wide evidence based decisions on material specifications. The system will also track all the samples the Ministry tests through its referee process.

LW: How quickly will it be implemented?

KB: Starting January 2017 the Ministry requires the WBCMS to be used for all tendered design bid build contracts utilizing consultant Contract Administrators. All of the Ministry's independent quality assurance laboratories at this time have had the opportunity to be trained on the use of this system. This system will eventually be used on all ministry capital construction projects.

LW: MTO will be establishing an expert panel on contract provisions and administrative practices, including best practices and approaches from other jurisdictions. Can you provide details?

KB: Later this year the Ministry will be establishing a panel of experts involved in public infrastructure projects to examine and provide advice associated with the Ministry's contract provisions and administrative practices based on their experience and best practices from other jurisdictions. It is expected that members of the panel will have expertise in contract procurement and contract law.

LW: MTO will be enhancing the oversight of the QVE certification process. Please explain why the Ministry wishes to continue with the QVE process?

KB: For this construction season the Ministry will be conducting random audits of the current QVE process for a number of projects across the province to ensure that all requirements are being met. In addition, the Ministry will pilot a project whereby the current QVE certification process will be replaced by a new process undertaken by Ministry staff.

The contractor is ultimately responsible for the quality of the materials and workmanship they provide to the ministry. The current QVE process was established to hold contractors accountable to the standards in the contract. The current system has room for improvement and thus a thorough review of the certification and QVE process is also underway which will lead to further changes to our requirements to ensure independence of the process.

LW: A province-wide tracking system for all pavement warranties will be implemented to enhance MTO's administration and oversight of work after it is complete. Are there any other changes being made to the oversight process on warranty contracts?

KB: In the short term the Ministry will make improvements to internal processes in order to better administer current project warranties. These changes will more clearly define our contract requirements and ensure consistent, objective evaluation of our requirements.

Soon all warranties will be tracked through the WBCMS which will allow enterprise-wide monitoring and review of warranties and warranty related issues.

LW: MTO will be establishing a Centre of Excellence for Transportation Infrastructure. Can you provide further details about the Centre and its mandate?

KB: Construction of the new Centre for Excellence in Transportation Infrastructure (CETI) will begin this spring. CETI will be the future home to the offices and laboratories of the Ministry's Materials Engineering and Research Office and Bridge Laboratory. CETI will support provincial highway construction by ensuring that quality materials and products are used and support innovation and the introduction of new products and processes.

We will continue to work in partnership with industry and universities to develop testing standards for emerging materials, products and technologies and provide oversight and establish standards for laboratories involved in provincial highway construction.

LW: Will CCIL be able to participate in this initiative?

KB: MTO will continue to work in partnership with CCIL and others regarding laboratory testing issues and we appreciate CCIL's interest and ongoing support

Lab Watch is a quarterly newsletter produced by the Canadian Council of Independent Laboratories. By opening this 'window' on our sector, we hope to engage government, industry and other stakeholders in an informed discussion of the issues.

CCIL represents the independently-owned, private-sector testing laboratories in Canada. Operating more than 330 facilities across the country, our members help ensure the quality and safety of highways, bridges, buildings, other infrastructure, manufactured goods, water, food, soil, air and more.

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