

Improvements in Asphalt Testing

by

Nabil Kamel, M.A.Sc. P.Eng.

CCIL Program Manager


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Introduction

Who CCIL is? what do we do?

- non-profit organization
- Safeguarding the Public and the environment
- Help protect quality, reliability and integrity of our road network, transportation system and our buildings
- Provide laboratory and Technician certification programs for the highway construction industry involved in asphalt, concrete, aggregate and soils materials testing


Introduction

Who CCIL is? what do we do?

- CCIL provides an independent 3rd. party assessment with no interest in the ramification of the results
- We have been in business for over 25 years. Started asphalt laboratory certification in Ontario in the late 80's and evolved to be a well respected Canadian National Organization with CCIL certified labs in all Provinces
- We have @ 900 lab certifications, Nation-wide
- Sole Canadian provider of laboratory and technician certifications for testing highway construction materials in Canada




CCIL Certification Program Make-up Asphalt and Aggregate Materials

- The cornerstone of the program are Integrity and Confidentiality as per ISO 17025
 - In addition, CCIL directive for a distinct effort of the CCIL staff to work with the labs to improve results/raise standards of testing
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CCIL Certification Program Make-up Asphalt and Aggregate Materials

- CCIL Certification Programs are administered by **LOCAL** Admin Committees entrusted with establishing, reviewing, and revising, as necessary, the technical criteria for the core elements of the program in accordance with overall CCIL criteria
 - Participation in the local Administration Committees by all *local Stakeholders*: testing labs, contractor labs, Provincial Government and Municipal Authorities.
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CCIL Certification Program Make-up Asphalt, Aggregate and Soils

In general, the CCIL certification programs are in compliance with ISO 17025, with 5 main components:

- Laboratory Inspections
 - Proficiency sample testing on annual basis
 - Proficiency samples program follow-up
 - Quality manual & Internal Audits
 - Technician Certification
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CCIL Certification Program Make-up Asphalt and Aggregate Materials

	<u>CCIL</u>	<u>Canadian Mix Exchange</u>	<u>ISO 17025</u>	<u>AASHTO/ AMRL</u>
Interlab Correlation	√	√	?	√
Correlation Follow up	√	-	-	?
Lab Audits	√	-	√	√
Quality System	√	-	√	√
Technician Certificate	√	-	-	√

CCIL Certification Programs Overview, 2017

- Asphalt and Aggregate certified laboratories in AB, BC, MB, NB, NL, ON and SK
- Total number of Asphalt laboratories.....223
- Total number of Aggregate laboratories..... 343

- Concrete certified laboratories nation-wide, in all provinces as well as in the NW Territories
- Total number of Concrete laboratories.....333
- Over 5500 certified technicians in HMA, Agg & Concrete

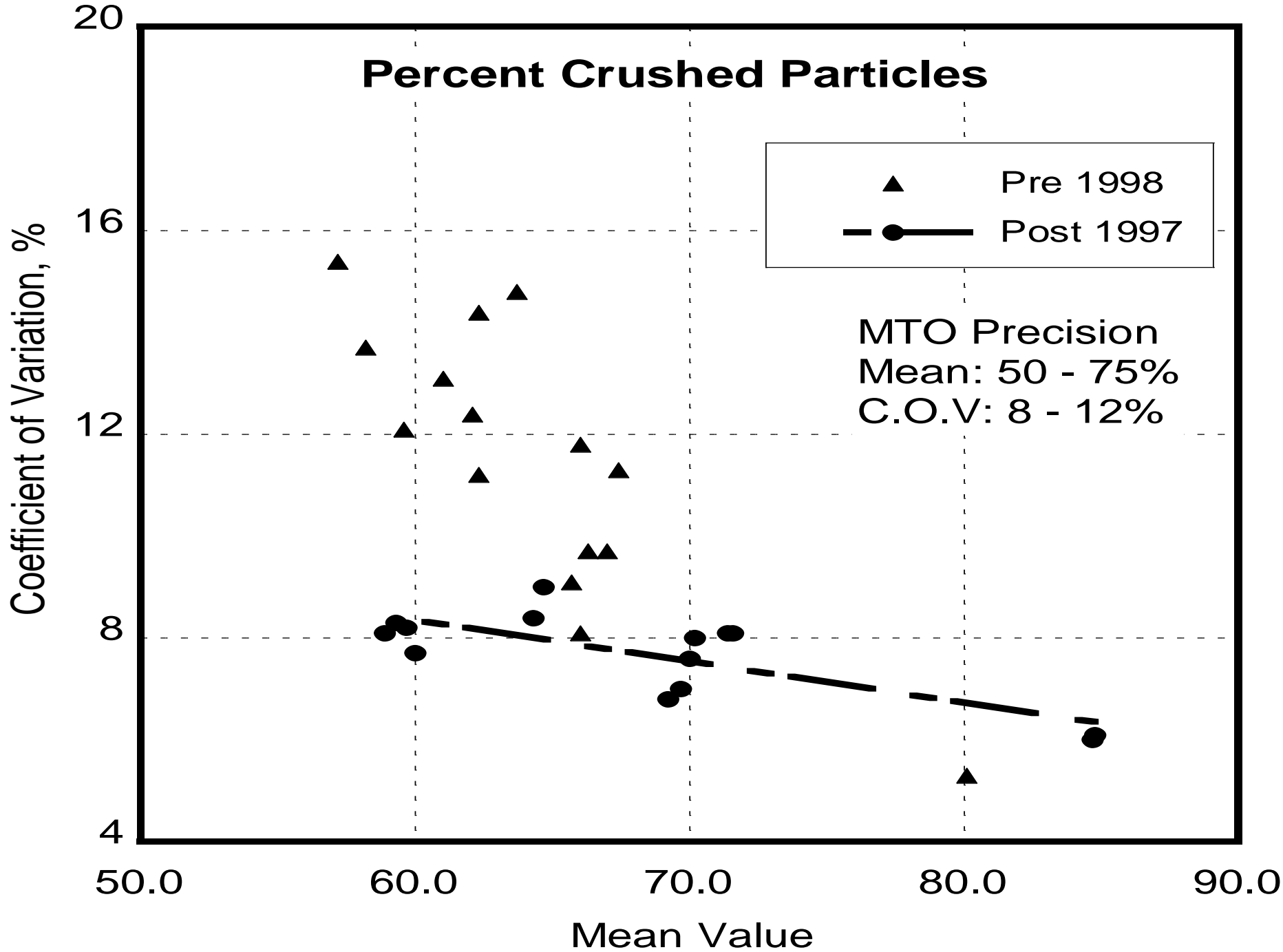
CCIL Certification Program; %AC – Ignition Correlation Results

	2008	2012	2016	2017
Mean, BC	5.11	5.11	5.08	5.10
Mean, ON	5.03	5.10	5.08	5.11
SD, BC	0.17	0.12	0.12	0.10
SD, ON	0.10	0.10	0.11	0.09

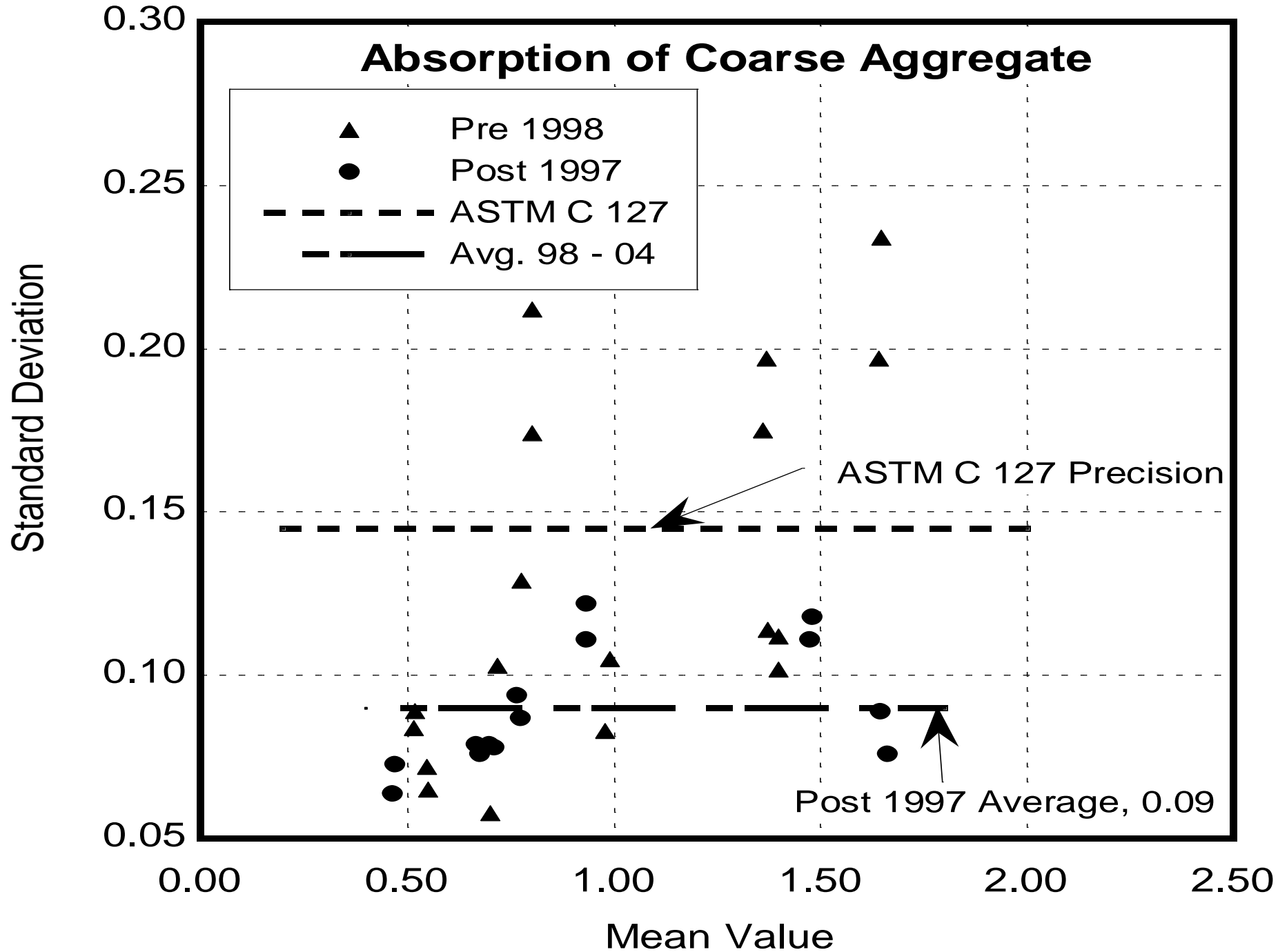
CCIL Certification Program: Mix Compliance Correlation Results

	2008	2012	2016	2017
SD, BRD, BC	0.091	0.050	0.014	0.016
SD, BRD, ON	0.010	0.010	0.013	0.016
SD, AV, BC	1.269	1.185	0.71	0.50
SD, AV, ON	0.405	0.441	0.65	0.47
SD, VMA, BC	1.583	??	0.41	0.64
SD, VMA, ON	0.500	0.616	0.46	0.62

Percent Crushed Particles




Absorption of Coarse Aggregate





CCIL Certification Program Results

- Results from AB, BC and ON confirm significant improvements in test result variations after lab certification
 - ON, BC and AB reported significant reductions in the number of contract disputes after introduction of lab certification.
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Summary Lab certification Benefits

Regular lab auditing & participation in Prof. Tests

- Ensures up-to-date & uniform test procedures
- Ensures testing is by qualified and trained staff
- Ensures equipment are calibrated and maintained
- Encourage technician training/certification
- Improves standard of excellence in testing
- Increases confidence in test results
- Reduces test variations and
- Reduces potential for job interruptions and disputes



Lab Certification is a win-win to all

- Regulators: the assurance that regulation is supported by valid test data
 - Owners: the assurance that the project is built in accordance with the specified test requirements
 - Contractors, producers, consultants & testing laboratories: improved confidence in testing results and reduced potential for job interruptions, construction delays and contract disputes
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CCIL Laboratory and Technician Certification Programs

Thank you

nkamel@ccil.com

Questions?

