

TO: All H.Q. Directors: Prof. Services, Planning & Major Projects
All Regional Directors
All Regional Managers: Prof. Services, Planning & Operations
All District Highways Managers

SUBJECT: Sampling, Testing and Storing Materials Supplied by
Maintenance and Project Contractors

REFERENCE: Ministry Standard Specifications for Highway Construction,
Ministry Manuals of Test Procedures, CSA, ASTM and AASHTO

BACKGROUND: Various projects have various types of materials supplied by the contractor and installed or incorporated in project work without prior assurance that the materials meet the industry or Ministry standards, as specified in the contracts for the individual project.

While for some materials, the receipt of the suppliers QC and/or certification that the material(s) meet the requested standard (Ministry, CSA, ASTM, etc.) might suffice, for some other materials sampling and immediate testing are of paramount importance, in order to avoid the incorporation of non-performing materials into the works.

At the February 17, 1994 Professional Services Meeting (Item MPS93-13), concurrence was reached to prepare guidelines and implement measures aimed at providing the Ministry with the desired Quality Assurance for the supplied materials.

PROCEDURE: All materials to be incorporated into the Ministry Roadway Infrastructure shall be in accordance with the latest edition of the MOTM "Standard Specification for Highway Construction". Manufactured products will be checked for compliance with the dimensions shown on the drawings, coating thicknesses, structural properties and integrity. Materials will be sampled, as detailed in the attached tables, and tested at the job site or at the nearest Regional/H.Q. Centre equipped for the type of testing required. Each sample must be labelled at the time of sampling with full details as to supplier, material type, batch, date, location where used Ministry inspector, and the like.

PROCEDURE: (Continued)

- 1) Provision must be made to ensure that testing for materials coded "A" is effected prior to the incorporation of basic materials into mixes and into the works.
- 2) Materials coded "B" will be sampled at the job site and sent for testing, when, not available at the site, to the nearest Ministry of private facility.
- 3) Materials coded "C" will be sampled and stored at the pertinent regional laboratory, until tested, and if conforming, disposed through the nearest recycling facility.

Storage beyond this period will be reviewed by the Ministry Geotechnical and Materials Engineering Branch.

- 4) Regional laboratories will maintain a file identifying type of product/material, its storage location and related documentation on hand.

Size of storage areas will vary with the needs. Only materials which have not been tested, for acceptance, during the construction phase, will need to be stored, save for samples of bridge paint and cement, which will be stored securely for the full legal period in which either party in a contract could raise a claim. This can be limited by the shelf life of the product.

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QUALITY ASSURANCE FOR MATERIALS SUPPLIED BY CONTRACTORS

TYPE OF MATERIAL	SAMPLE		TYPE OF TEST AND CODE			Maximum Storage Time (Prior to Testing)
	Size	Unit	Job Site	Regional Lab or by "Others"	H.Q. Lab or by "Others"	
Asphalt Cement	1 L	Each Delivered Load	Penetration (A)	Viscosity (B) Ductility (C)	Chemical Analysis (B) if needed	
Liquid Asphalts	1 L	Each Delivered Load	Viscosity (A)	Residue From Distillation (B)		6 months for residue
High Floats	1 L	Each Delivered Load	Viscosity (A)	Residue From Distillation (B)		6 months for residue
Emulsions	1 L	Each Delivered Load	Viscosity (A)	Residue From Distillation (B)		
Solvents	1 L	Each delivered Barrel			Chemical Analysis (B)	
Traffic Paint	8 L	Each Batch			Chemical Analysis (B)	
Glass Bead (CL)	1 Sack	One Sack every 2 Tonnes			Shape (B) Moisture resistance, gradation	
Portland Cement	2.5 kg	Each project over 250 m ³ total pour or for each mill certificate, whichever is greater			Chemical Analysis, Setting Time (C)	3 months
Portland Cement Concrete	36 L	Every 3 Loads Every 3 Loads	----- Test (Air, Slump, Temp. etc.) (A)	Compression Tests on cylinders (B)		
AGGREGATES 50 & 75 mm Base Course Sub-Base All other Aggregates	25 kg 25 kg	As per Technical Circular T-5/90	Sieve Analysis (A) Wash Test (A) Sieve Analysis (A) Wash Test (A)	Soundness - degradation sand equivalent, and durability index (B)		prior to working source
Reinforcing Steel Bars - (mill certificate or)	2 - 1 m bar lengths	for each designation number		Tension and Bond Test (A) South Coast Lab		
Grout for Ducts Post Tensioned Tendons	Grout Cubes	for each batch		Compression Test (B)		
PVC Pipe (obtain certificate) or		as required by testing Lab		as requested by purchaser	(B)	6 months
C.S.P.		as required by testing Lab		Zinc coating - seam- thickness	(B)	6 months
Geosynthetic, fabric Grid and Cloth	2 m2	each type of material (1 every 5 rolls)			Tensile, burst, etc. (B) as requested by purchaser	3 months
Bridge Paint	4 L Kit	each batch (complete kit for plural component)			(A) - (B) - (C)	ahead of start-up of work
Bridge Paint	1 L	each batch for single component			(A) - (B) - (C)	1 - 3 months
De-icing salt	5 kg	bid sample prior to P.O.		Rel. Density - gradation (A)	purity (B)	
De-icing salt	5 kg	each delivered load	Rel. Density (A)		purity (B)	1 month
Dust Palliatives	2 L	each Truck	Rel. Density (A)	see Tech. Circular T-5/94 and sampling procedure letter		