Montana Department of Transportation	Date Issued: 10/5/15
	Date Effective: 10/5/15
CONSTRUCTION MEMO	Related Specifications: 551.03.7(A)
Subject: Guidance on the use of Evaporation Retarders	

To: Distribution

From: Matthew R. Strizich, P.E.
Materials Engineer

The intent of this memorandum is to provide guidance for Standard Specification Subsection 551.03.7(A), Curing Concrete, related to the use of monomolecular film curing agents (evaporation retarders).

The use of these products should not be approved on projects currently under contract or that will be let prior to the specification being supplemented. The current specification requires EPM approval prior to use, so denying their use should not create contractual issues. The language in the current Standard Specifications is in the process of being revised to prohibit the use of these products. Paragraphs 3-5 of Subsection 551.03.7A are being rescinded in the supplemental specification currently being developed and which will be sent out for comment in October.

The reason for the change is that although they are beneficial products when used correctly, it has been noted on multiple MDT projects that evaporation retarders are being used inappropriately. They are commonly being referred to as “finishing aides”, which is misleading and appears to be creating the confusion and leading to the misuse. Evaporation retarders (e.g. SikaFilm, EucoBar, etc.) are intended to reduce the potential for rapid moisture loss from concrete in its plastic stage therefor reducing plastic shrinkage cracking, reduced surface strength, etc. In order for the monomolecular film to provide this protection, it must not be manipulated after its application. In most noted instances, the concrete continues to be finished immediately after the application of these products, breaking down the film, and only increasing the near surface water to cementitious materials ratio (W/CM). Most evaporation retarders are diluted with water at a rate greater than 8/1 per manufacture’s recommendations. The W/CM increase caused when it is worked into the surface can cause a significant decrease to the durability of the near surface concrete causing a potential reduction in service life due to mortar-flaking and surface scaling.

Evaporation retarders, when used correctly, can effectively mitigate plastic concrete problems when certain environmental conditions exist. The benefits will only be realized when the concrete is left untouched after the products application, until it has evaporated, therefore maintaining its barrier-like integrity.

Contact Paul Bushnell at 444-7041or Matt Needham at 444-7260 if you have questions regarding this product.

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