

October 16, 2008

Mr. Allan Orr  
Blue Steel Chemicals  
9659 - 49 Avenue  
Edmonton, Alberta  
T6E 5Z5

RE: RePlay - Agricultural Oil Seal & Preservation Agent

Dear Mr. Orr

We are writing this letter to say how pleased we are with the preliminary findings of a trial placement of RePlay, Agricultural Oil Seal & Preservation Agent. The project encompassed a portion of Hagen Way and a portion of Hagen Link in the South West portion of the City of Edmonton.

The project was chosen due to the presence of check cracking (transverse hairline cracks) in the surface of the FAC (Final Acceptance) overlay placed earlier in the summer of 2008. The check cracking was found through coring to extend from the surface of the asphalt down and generally terminate at the first occurrence of a rock in the mix, within 5 to 10mm of the surface. The presence of these cracks is typically a result of a tender mix, which is defined as a mix that does not possess enough internal strength at higher temperatures to support compaction equipment during rolling, a hump in the sand gradation curve or improper rolling techniques such as rolling too fast, stopping too quick, excessive rolling or finish rolling at too high a temperature.

Generally check cracking does not affect the structural integrity of the pavement structure, but our standard repair is to mill off the surface 10-15mm of Asphalt and replace it with sound asphalt.

On the section of Hagen Way and Hagen Link, the City of Edmonton allowed the contractor to place RePlay on the surface of the checked asphalt to see if the cracks could be sealed without having to remove and replace the asphalt.

The RePlay material was supplied and placed by Blue Steel Chemicals using the manufacturers recommended dosage rate using a truck mounted spray bar. The material was applied to the road and allowed to cure for approximately 30 minutes before traffic was allowed onto the surface.

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Three Weeks after placement of the RePlay materials staff from the City of Edmonton's Quality Assurance Testing Laboratory retrieved several 150mm diameter cores from the site to visually assess the performance of the RePlay.

Upon examining the cores it was noted that the RePlay material had penetrated the surface of the asphalt to depths ranging from 20mm to 40mm, which is consistent with the literature provided from BioSpan Technologies Inc. It was also noted that the cracks, while still visible on the surface of the cores were sealed the full depth when looking at the side of the cores. Again this is consistent with the literature from BioSpan Technologies Inc.

The City of Edmonton will continue to monitor the trial section of RePlay and look forward to working with you in the placement of several other trial sections.



Hugh B. Donovan P.Eng.  
Construction Services Engineer  
Engineering Services Branch  
Transportation Department  
City of Edmonton

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