

ALBERTA TRANSPORTATION CONSTRUCTION BULLETIN #27

MONITORING THE USE OF ASPHALT CEMENTS AND LIQUID ANTI-STRIP ADDITIVES

Introduction

This Construction Bulletin is to remind consultants, and provides guidance, in regards to monitoring activities to ensure that the specified grades and quantities of asphalt cements and liquid anti-strip additives are being added. Since 2015 all asphalt mixes have been specified to contain a liquid anti-strip additive as listed on the Transportation Products List.

References to Specification 3.50 ACP – EPS also apply to Specification 3.53 Superpave.

Collection of Asphalt Weigh Bills

On a daily basis the Consultant is to collect asphalt cement delivery weigh bills or copies thereof. On many paving projects there could be more than one asphalt grade specified. Collecting weigh bills allows the Consultant to monitor whether the proper asphalt grade and amount is being used.

One means of doing this is to compare the delivered quantity of asphalt cement to that calculated based upon ACP tonnage and target asphalt. For example 20,000 tonnes of ACP at a target asphalt content of 5.4% (by wt. of dry aggregate) would require 1,025 tonnes of asphalt cement.

$$20,000 - (20,000/(1+0.054)) = 1024.7$$

Discrepancies between bulk measured asphalt contents versus targeted values should be reconciled between the Consultant and Contractor. Failing that the Consultant may elect to undertake QA testing as outlined in Specification 3.50.1.2.12 QA Acceptance Lot.

Labels for asphalt cement samples taken for QA testing should also include information contained on the delivery weigh bills – see Specification 5.7 Supply of Asphalt and ATT-42 Asphalt Sampling.

As a side note, if the Contractor is using more than 10% RAP in the ACP mix, the actual supplied grade may not match with the specified asphalt grade in order to meet Asphalt Grade Adjustments as outlined in Specification 3.50.2.4 Reclaimed Asphalt Pavement.

Liquid anti-strip additives when added by the asphalt supplier will be indicated in regards to product type and dosage rate (% by weight of binder).

QC Mix Plant Inspection Forms

On a daily basis the Consultant is to collect a copy of the Asphalt Mix Plant Inspection form as outlined in Table 3.50.4.3 Quality Control Testing Requirements – Managed QA Testing Projects of Specifications 3.50 ACP and 3.53 Superpave.

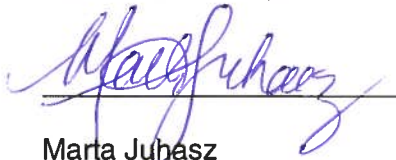
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Some Contractors have begun to inject the liquid anti-strip additive during mixing operations. In those cases the Contractor is to provide metered readings and bulk measurements indicating the targeted and actual dosage rates. A generic example of what such an inspection form may look like is attached.

Effective Date: Immediately.

Questions on this bulletin may be directed to the Pavement Engineering Section.

Recommended by:



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Director
Pavement Engineering Section

Approved by:



for: Des Williamson
Executive Director
Technical Services Branch



DAILY LIQUID ANTI-STRIP ADDITIVE (Generic Example)

CONTRACT :	12345	ASPHALT GRADE :	PG 58-28	ANTI-STRIP CALIB # (kg/rev) :	1.0039
PROJECT :	HWY 92:12	ASPHALT SUPPLIER :	HUSKY	ASPHALT CALIB # :	1.0010
MIX DESIGN #	556677	PAVING CONTRACTOR :	STARLORD	TECHNOLOGIST :	J. Goodson
LIQUID ANTI-STRIP ADDITIVE NAME:		MORLIFE 5000		DESIRED LIQUID ANTI-STRIP %	0.30 %

DATE	LOT #	TOTALIZER		CORRECTED TOTAL		Calculated Liquid Anti-Strip Added %	Liquid Anti-strip quantity determined by tote measurement kg
		ANTI-STRIP	ASPHALT OIL	ANTI-STRIP	ASPHALT OIL		
		rev	t	kg	t		
June 1, 2017	1	102.45	34.000	102.8	34.03	0.302	
June 2, 2017	2	216.05	70.450	216.9	70.52	0.308	
June 3, 2017	3	200.14	67.100	200.9	67.17	0.299	
June 4, 2017	4	119.50	38.600	120.0	38.64	0.310	
June 5, 2017	5	297.19	96.600	298.3	96.70	0.309	
June 6, 2017	6	306.64	97.086	307.8	97.18	0.317	
June 7, 2017	7	437.02	141.700	438.7	141.84	0.309	
June 8, 2017	8	188.67	59.900	189.4	59.96	0.316	
June 9, 2017	9	288.49	93.690	289.6	93.78	0.309	
June 10, 2017	10	583.28	184.390	585.6	184.57	0.317	
June 11, 2017	11	530.88	171.800	533.0	171.97	0.310	
June 12, 2017	12	452.91	147.800	454.7	147.95	0.307	
June 13, 2017	13	297.19	96.600	298.3	96.70	0.309	
June 14, 2017	14	390.80	123.800	392.3	123.92	0.317	
June 15, 2017	15	119.51	38.630	120.0	38.67	0.310	
June 16, 2017	16	138.88	45.100	139.4	45.15	0.309	
June 17, 2017	17	193.50	63.800	194.3	63.86	0.304	
June 18, 2017	18	188.00	61.364	188.7	61.43	0.307	
June 19, 2017	19	193.57	63.660	194.3	63.72	0.305	
June 20, 2017	20	188.66	59.590	189.4	59.65	0.318	
June 21, 2017	21	452.91	147.700	454.7	147.85	0.308	
June 22, 2017	22	292.20	95.110	293.3	95.21	0.308	
June 23, 2017	23	256.60	85.111	257.6	85.20	0.302	
June 24, 2017	24	301.55	99.200	302.7	99.30	0.305	
June 25, 2017	25	288.56	95.120	289.7	95.22	0.304	
June 26, 2017	26	422.55	140.120	424.2	140.26	0.302	
June 27, 2017	27	486.65	160.260	488.5	160.42	0.305	
June 28, 2017	28	122.58	40.890	123.1	40.93	0.301	
TOTALS				8088.4	2621.8	0.308 avg.	0.000

enter data into shaded areas