October 5, 2017

Exshaw Cement Plant, Lafarge Canada Inc.
Highway 1A, PO Box 160
Exshaw, AB T0L 2C0

Attention: Jim Bachmann, Plant Manager

Dear Jim:

Subject: Exshaw Cement Plant Traffic Impact Assessment Executive Summary

We are pleased to provide you with a brief executive summary of our May 2017 Exshaw Cement Plant Traffic Impact Assessment.

The Exshaw Cement Plant Traffic Impact Assessment was prepared by WSP in May 2017 to determine the potential impacts and improvements required to the surrounding transportation road network as a result of the additional truck traffic generated by the introduction of low carbon fuels (LCF) at the Exshaw Cement Plant. LCF will be implemented starting with a 50% (maximum 120kT/year) substitution and ramping up to a maximum capacity of 80% (200kT/year). For the purpose of this report, WSP assumed a worst case scenario and based assumptions off of an 80% substitution for all future forecasts.

This study analyzed the existing conditions, future background volumes and the post development operating conditions in order to identify the potential impacts and improvements required at the studied intersections as a result of the additional traffic generated by the proposed development.

The analysis was carried out for three horizon years: 2019, 2022 and 2037 consistent with the Alberta Transportation Traffic Impact Assessment Guideline.

	Background Hwy 1A Traffic Including Existing Lafarge (vehicles/day) **	Production Volumes (T/year)	% Increase Product-ion Volumes	Lafarge Traffic (vehicles /day) ***	LCF Trucks (80%)	% Increase of Lafarge Traffic Relative to Back-ground Traffic ****	% Increase of LCF Trucks Relative to Back-ground Traffic
Existing	2,230	1,485,000	-	198	-	-	-
2019	2,420	1,678,000	1.512 %	216	27	0.7 %	1 %
2022	2,650	2,200,000	1.98 %	245	36	2 %	1 %
2037	3,750	2,200,000	1.98 %	245	36	1 %	1 %

**A growth rate of 4.0% was used to estimate the 2019 and 2022 background traffic volumes and 2.5% to estimate the long term (2037) background volumes.
*** Assumptions on site generated traffic volumes in this column were provided by Lafarge and exclude the low carbon fuel trucks
**** From baseline traffic of 198 vehicles per day, and excludes low carbon fuel trucks

The transportation / roadway capacity analysis results led to the conclusion that the additional traffic generated by the proposed development can be accommodated by the studied intersections, therefore no improvements are required as a result of the proposed changes in the development.

In addition, during the course of this assessment it has been recommended that due to the growth in background traffic volumes on Highway 1A and the left turn lane warrant analysis on the access roads further investigation work needs to be done in conjunction with Alberta Transportation to assess the access designs located on Highway 1A.

Yours sincerely,

Mark Stout, MES, PEng, RPP, MCIP
Project Manager, Transportation Planning