

MILL TEST REPORT

Cement Type: **CSA Type GUL**
Low Alkali Portland Limestone Cement

Plant: **Delta, BC**

Certificate No.:	D1L-08
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Production Period:	Dec 01 2011 Dec 31 2011	Test Result	CSA A3001 Specification
SiO2 (%)	CSA A3003	18.9	-
Al2O3 (%)	CSA A3003	4.55	-
Fe2O3 (%)	CSA A3003	3.57	-
CaO (%)	CSA A3003	64.9	-
MgO (%)	CSA A3003	0.865	-
SO3 (%)	CSA A3003	2.82	max. 3.0
Na2O (%)	CSA A3003	0.26	-
K2O (%)	CSA A3003	0.33	-
TiO2 (%)	CSA A3003	0.24	-
Equivalent Alkalies (%)	ASTM C150	0.47	max. 0.60
Loss on Ignition (%)	CSA A3003	5.14	max. 10.0
Free Calcium Oxide (%)	CSA A3003	0.43	
Vicat Setting Time			
Initial (minutes)	CSA A3004-B2	102	min. 45 max. 375
Final (minutes)	CSA A3004-B2	206	-
Blaine Fineness (m2/kg)	ASTM C204	483	-
+325 mesh	CSA A3004-A3	0.88	max. 28
Air Content (%)	CSA A3004-C4	5.86	-
Autoclave Expansion (%)	CSA A3004-B5	-0.03	max. 1.0
Compressive Strength		MPa / psi	
3 Day	CSA A3004-C2	34.0 / 4923	min. 14.5
7 Day	CSA A3004-C2	39.0 / 5655	min. 20.0
28 Day (previous month)	CSA A3004-C2	44.7 / 6474	min. 26.5

This will certify that the above described cement meets the standard chemical and physical requirements of CSA Specification A3001-08 for Type GUL Portland Limestone Cement.

Siu Kei (S.K.) Ng
 Plant Chemist



January 10, 2012

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