



**Cement**

**FLY ASH TEST REPORT**

Analysis by: Edmonton Mortar Lab  
Sample from : Sundance Power Plant  
Average Analysis: November 2021  
Test Report Number 12-21 F CSA

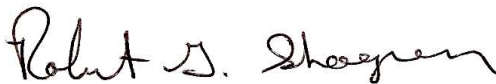
**Chemical Analysis**

		Limits
Silicon Dioxide (SiO <sub>2</sub> )	<b>58.3 %</b>	
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	<b>23.5 %</b>	
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	<b>3.5 %</b>	
Sulphur Trioxide (SO <sub>3</sub> )	<b>0.1 %</b>	
Calcium Oxide (CaO)	<b>9.1 %</b>	15% Max - CSA
Magnesium Oxide	<b>1.1 %</b>	
Moisture Content	<b>0.21 %</b>	
Loss on Ignition	<b>0.43 %</b>	
Total Alkalies as Equivalent Na <sub>2</sub> O	<b>3.19 %</b>	

**Physical Analysis**

Fineness Retained on 45 um (No. 325 Sieve)	<b>30.0 %</b>	34% Max - CSA
Strength Activity Index with Portland Cement		
% of Control at 28 Days ( <i>previous month's result</i> )	<b>93 %</b>	
Water Requirement, Percent of Control	<b>95 %</b>	
Autoclave Expansion	<b>0.00 %</b>	
Density	<b>2.03 Mg/m<sup>3</sup></b>	

We hereby certify that the composite fly ash sample above meets the chemical and physical requirements of CAN/CSA A3001 for Type F Fly Ash.

Certified . 

Rob Shogren  
Technical Director

**WESTERN REGION**

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