



## Cement

### FLY ASH TEST REPORT

Analysis by: Edmonton Mortar Lab  
Sample from : Sundance Power Plant  
Average Analysis: October 2021  
Test Report Number 11-21 Class F

#### Chemical Analysis

	Results	Limits
Silicon Dioxide (SiO <sub>2</sub> )	61.9 %	
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	22.4 %	
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	3.7 %	
Total (SiO <sub>2</sub> ) + (Al <sub>2</sub> O <sub>3</sub> ) + (Fe <sub>2</sub> O <sub>3</sub> )	88.0 %	50% Min - ASTM
Sulphur Trioxide (SO <sub>3</sub> )	0.0 %	5% Max - ASTM
Calcium Oxide (CaO)	8.6 %	18% Max - ASTM
Magnesium Oxide	1.1 %	
Moisture Content	0.24 %	3% Max - ASTM
Loss on Ignition	0.45 %	6% Max - ASTM
Available Alkali as Equiv. Na <sub>2</sub> O ( <i>previous month's result</i> )	0.29 %	

#### Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	33.4 %	34% Max - ASTM
Strength Activity Index with Portland Cement		
% of Control at 7 Days	85 %	75% Min - ASTM
% of Control at 28 Days ( <i>previous month's result</i> )	91 %	75% Min - ASTM
Water Requirement, Percent of Control	96 %	105% Max- ASTM
Autoclave Expansion	0.00 %	0.8% Max - ASTM
Density	2.03 Mg/m <sup>3</sup>	

#### Uniformity Requirements

Density, Variation from Average	0.50 %	5% Max - ASTM
Fineness 45um Sieve, Variation from Average	1.10 %	5% Max - ASTM

We hereby certify that the composite fly ash sample above meets the chemical and physical requirements of ASTM C618 and AASHTO M295 for class F fly ash.

Certified : 

#### WESTERN REGION

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