



## Cement

### FLY ASH TEST REPORT

Analysis by: Lafarge Seattle Concrete Lab  
Sample from : Centralia Power Plant  
Average Analysis: March 2025  
Test Report Number 3-25 Class F

#### Chemical Analysis

	Results	Limits
Silicon Dioxide ( $\text{SiO}_2$ )	50.5 %	
Aluminum Oxide ( $\text{Al}_2\text{O}_3$ )	17.6 %	
Iron Oxide ( $\text{Fe}_2\text{O}_3$ )	6.0 %	
Total ( $\text{SiO}_2$ ) + ( $\text{Al}_2\text{O}_3$ ) + ( $\text{Fe}_2\text{O}_3$ )	74 %	50% Min - ASTM
Sulphur Trioxide ( $\text{SO}_3$ )	1.1 %	5% Max - ASTM
Calcium Oxide ( $\text{CaO}$ )	13.9 %	18% Max - ASTM
Magnesium Oxide	4.0 %	
Moisture Content	0.17 %	3% Max - ASTM
Loss on Ignition	0.52 %	5% Max
Available Alkali as Equiv. $\text{Na}_2\text{O}$ (previous month's result)	0.34 %	1.5% Max

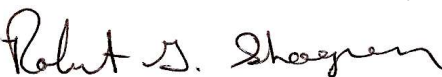
#### Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	15.0 %	34% Max - ASTM
Strength Activity Index with Portland Cement		
% of Control at 7 Days	95 %	75% Min - ASTM
% of Control at 28 Days (previous month's result)	104 %	75% Min - ASTM
Water Requirement, Percent of Control	91 %	105% Max- ASTM
Density	2.63 $\text{Mg/m}^3$	

#### Uniformity Requirements

Density, Variation from Average	0.30 %	5% Max - ASTM
Fineness 45um Sieve, Variation from Average	1.30 %	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 : \_\_\_\_\_

Rob Shogren  
Technical Director

#### WESTERN REGION

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