



Cement

FLY ASH TEST REPORT

Analysis by: Lafarge Seattle Concrete Lab
Sample from : Sundance Power Plant
Average Analysis: June 2021
Test Report Number 7-21 Class F

Chemical Analysis

	Results	Limits
Silicon Dioxide (SiO_2)	60.1 %	
Aluminum Oxide (Al_2O_3)	23.0 %	
Iron Oxide (Fe_2O_3)	3.8 %	
Total (SiO_2) + (Al_2O_3) + (Fe_2O_3)	87 %	50% Min - ASTM
Sulphur Trioxide (SO_3)	0.1 %	5% Max - ASTM
Calcium Oxide (CaO)	8.7 %	18% Max - ASTM
Magnesium Oxide	1.3 %	
Moisture Content	0.08 %	3% Max - ASTM
Loss on Ignition	0.27 %	5% Max
Available Alkali as Equiv. Na_2O (previous month's result)	0.30 %	1.5% Max

Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	26.0 %	34% Max - ASTM
Strength Activity Index with Portland Cement		
% of Control at 7 Days	77 %	75% Min - ASTM
% of Control at 28 Days (previous month's result)	85 %	75% Min - ASTM
Water Requirement, Percent of Control	95 %	105% Max - ASTM
Autoclave Expansion	0.00 %	0.8% Max - ASTM
Density	1.99 Mg/m^3	

Uniformity Requirements

Density, Variation from Average	0.10 %	5% Max - ASTM
Fineness 45um Sieve, Variation from Average	2.90 %	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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