LAFARGE NORTH AMERICA

Cement

FLY ASH TEST REPORT

Analysis by:	Lafarge Seattle Concrete Lab
Sample from :	Centralia Power Plant
Average Analysis:	March 2023
Test Report Number	4-23 Class F

Chemical Analysis

	Results	Limits
Silicon Dioxide (SiO_2)	**43.5 %**	
Aluminum Oxide (Al_2O_3)	**18.7 %**	
Iron Oxide (Fe_2O_3)	**5.9 %**	
Total (SiO_2) + (Al_2O_3) + (Fe_2O_3)	**68 %**	50% Min - ASTM
Sulphur Trioxide (SO_3)	**1.5 %**	5% Max - ASTM
Calcium Oxide (CaO)	**17.3 %**	18% Max - ASTM
Magnesium Oxide	**4.6 %**	
Moisture Content	**0.14 %**	3% Max - ASTM
Loss on Ignition	**0.30 %**	5% Max
Available Alkali as Equiv. Na_20 *(previous month's result)*	**0.81 %**	1.5% Max

Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	**14.8 %**	34% Max - ASTM
Strength Activity Index with Portland Cement		
% of Control at 7 Days	**98 %**	75% Min - ASTM
% of Control at 28 Days *(previous month's result)*	**110 %**	75% Min - ASTM
Water Requirement, Percent of Control	**96 %**	105% Max- ASTM
Autoclave Expansion	**0.02 %**	0.8% Max - ASTM
Density	**2.64 Mg/m^3**	

Uniformity Requirements

Density, Variation from Average	**0.96 %**	5% Max - ASTM
Fineness 45um Sieve, Variation from Average	**2.30 %**	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

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