LAFARGE NORTH AMERICA

Cement

FLY ASH TEST REPORT

Analysis by:	Lafarge Seattle Concrete Lab
Sample from :	Centralia Power Plant
Average Analysis:	February 2022
Test Report Number	3-22 Class F

Chemical Analysis

	Results		Limits
Silicon Dioxide (SiO_2)	**48.3**	**%**	
Aluminum Oxide (Al_2O_3)	**18.3**	**%**	
Iron Oxide (Fe_2O_3)	**6.2**	**%**	
Total (SiO_2) + (Al_2O_3) + (Fe_2O_3)	**73**	**%**	50% Min - ASTM
Sulphur Trioxide (SO_3)	**1.0**	**%**	5% Max - ASTM
Calcium Oxide (CaO)	**14.5**	**%**	18% Max - ASTM
Magnesium Oxide	**4.3**	**%**	
Moisture Content	**0.17**	**%**	3% Max - ASTM
Loss on Ignition	**0.26**	**%**	5% Max
Available Alkali as Equiv. Na_20 *(previous month's result)*	**0.34**	**%**	1.5% Max

Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	**13.7**	**%**	34% Max - ASTM
Strength Activity Index with Portland Cement			
% of Control at 7 Days	**102**	**%**	75% Min - ASTM
% of Control at 28 Days *(previous month's result)*	**108**	**%**	75% Min - ASTM
Water Requirement, Percent of Control	**93**	**%**	105% Max- ASTM
Autoclave Expansion	**0.02**	**%**	0.8% Max - ASTM
Density	**2.68**	**Mg/m^3**	

Uniformity Requirements

Density, Variation from Average	**0.00**	**%**	5% Max - ASTM
Fineness 45um Sieve, Variation from Average	**0.30**	**%**	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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