



## FLY ASH TEST REPORT

Sample from : Centralia/Kamloops Type F Fly Ash  
Average Analysis: March 2025  
Test Report Number Centralia/Kamloops-4-25\_F\_CSA  
Ash Source: Centralia Washington

### Chemical Analysis

Silicon Dioxide ( $\text{SiO}_2$ )	58.0 %
Aluminum Oxide ( $\text{Al}_2\text{O}_3$ )	12.8 %
Iron Oxide ( $\text{Fe}_2\text{O}_3$ )	5.9 %
Total ( $\text{SiO}_2$ ) + ( $\text{Al}_2\text{O}_3$ ) + ( $\text{Fe}_2\text{O}_3$ )	76.7 %
Sulphur Trioxide ( $\text{SO}_3$ )	0.5 %
Calcium Oxide ( $\text{CaO}$ )	12.8 %
Magnesium Oxide	3.1 %
Moisture Content	0.44 %
Loss on Ignition	2.50 %
Total Alkalies as Equivalent $\text{Na}_2\text{O}$	3.29 %

### Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	11.5 %
Fineness Retained on 160 um	0.2
Quality of Air Entrainment	1.1 %
Strength Activity Index with Portland Cement	
% of Control at 7 Days	81 %
% of Control at 28 Days ( <i>previous month's result</i> )	81 %
Water Requirement, Percent of Control	100 %
Density	2.69 g/cm <sup>3</sup>
Density, Variation from Average	0.60 %
Fineness 45um Sieve, Variation from Average	2.40 %

We hereby certify that the composite fly ash sample above meets the chemical, physical and testing frequency requirements of CAN/CSA A3001 for Type F Fly Ash.

\* Tested at CCIL, ASTM C1077 and AASHTO R18 Accredited Laboratory

A handwritten signature in black ink, appearing to read 'Rob Shogren'.

Rob Shogren, P.E.  
Technical Service Engineer  
Lafarge North America