FLY ASH TEST REPORT

Sample from : Sundance Harvested Fly Ash
Average Analysis: May 2025
Test Report Number Sundance_HA-6-25_F_CSA

Chemical Analysis

Silicon Dioxide (SiO_2)	**53.9**	%
Aluminum Oxide (Al_2O_3)	**22.1**	%
Iron Oxide (Fe_2O_3)	**3.3**	%
Total (SiO_2) + (Al_2O_3) + (Fe_2O_3)	**79.3**	**%**
Sulphur Trioxide (SO_3)	**0.2**	%
Calcium Oxide (CaO)	**7.5**	%
Magnesium Oxide	**0.8**	%
Moisture Content	**0.04**	%
Loss on Ignition	**1.94**	%
Total Alkalies as Equivalent Na_2O	**2.27**	%

Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	**23.5**	%
Fineness Retained on 160 um	**0.2**	
Quality of Air Entrianment	**1.0**	%
Strength Activity Index with Portland Cement		
% of Control at 28 Days *(previous month's result)*	**86**	%
Water Requirement, Percent of Control	**96**	%
Density	**2.17**	g/cm^3
Density, Variation from Average	**0.60**	**%**
Fineness 45um Sieve, Variation from Average	**4.20**	**%**

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**

Robert S. Shogren

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