HAWAIIAN CEMENT

F20260226-Silo #5-CIP
CERTIFICATE NUMBER

February 22, 2026
DATE

Laboratory Test Certification

Class F Coal Ash*
Source: Qinhuangdao, China

Chemical Analysis: (QUAL-XRF) - %		ASTM C 618-25a* Limits Class F
Silicon Oxide (SiO_2)	50.72	
Aluminum Oxide (Al_2O_3)	36.59	
Iron Oxide (Fe_2O_3)	3.21	
Sum (SiO_2+Al_2O_3+Fe_2O_3)	90.52	50 Min.
Calcium Oxide (CaO)	3.80	18 Max
Magnesium Oxide (MgO)	0.94	
Sulfur Trioxide (SO_3)	0.77	5.0 Max.
Sodium Oxide (Na_2O)	0.52	
Potassium Oxide (K_2O)	1.23	
NaEq (Na_2O + 0.658 K_2O)	1.36	
Moisture Content	0.45	3.0 Max.
Loss on Ignition (LOI)	3.1	6.0 Max.
Physical Analysis:		
Specific Gravity	2.22	CTL#3923002
Variation, % from Average	0.45	5% Max
Fineness - Retained on No. 325, %	6.1	34% Max
Variation, Points from Average	0.82	5 Max
Water Requirement, % of Control	103.3	105% Max
Strength Activity Index : **		
% of Control at 7 Days	80 %	75% Min.
% of Control at 28 Days	96 %	75% Min.

We certify that the above described composite sample of Coal Ash*, complies with the standard chemical and physical requirements of ASTM C618-25a*, Class F.

Cement Division

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