FLY ASH TEST REPORT

ASTM C618 - 19
AASHTO M 295 - 11 (2015)

ENX Inc.
Acheson Terminal
10798 HWY 60
Acheson, AB T7X 6N5

Report Date:	June 4, 2021
Project Number:	19-01608-002
Test No.:	21ENX-06
Revision:	0

Attention: Mr. Paul Johnson

Test Report Number:	**ENX G12-06-21_F_ASTM**
Year:	**2021**
Month of Analysis:	**June**

FLY ASH SOURCE: Genesee Generating Station (G12)
SAMPLED BY: Client
SAMPLE DATE: May 13, 2021
SAMPLES RECEIVED: May 17, 2021

CHEMICAL ANALYSIS

TEST DESCRIPTION	TEST RESULTS	UNITS	SPECIFICATION LIMITS CLASS F	SPECIFICATION LIMITS CLASS C
Silicon Dioxide (SiO_2)	**62.3**	%	-	-
Aluminum Oxide (Al_2O_3)	**20.3**	%	-	-
Iron Oxide (Fe_2O_3)	**4.7**	%	-	-
Total (SiO_2) + (Al_2O_3) + (Fe_2O_3)	**87.3**	%	50% (min)	50% (min)
Sulphur Trioxide (SO_3)	**0.11**	%	5.0% (max)	5.0% (max)
Calcium Oxide (CaO)	**5.90**	%	18.0% (max)	> 18.0%
Magnesium Oxide (MgO)	**1.40**	%	-	-
Moisture Content	**0.06**	%	3% (max)	3% (max)
Loss on Ignition (LOI)	**0.79**	%	6% (max)	6% (max)
Total Equivalent Alkali Content (Na_2Oeq)	**3.80**	%	-	-
Total Available Equivalent Alkali Content (Na_2Oeq)	**0.55**	%	-	-

PHYSICAL ANALYSIS

TEST DESCRIPTION	TEST RESULTS	UNITS	SPECIFICATION LIMITS CLASS F	SPECIFICATION LIMITS CLASS C
Fineness Retained on 45µm (No. 325 Sieve)	**26.0**	%	34% (max)	34% (max)
Quantity of Air Entrainment	**1.00**	%	-	-
Drying Shrinkage (Increase at 28-days)	**0.00**	%	0.03% (max)	0.03% (max)
Strength Activity Index with Portland Cement				
% of Control at 7-Days	**77**	%	75% (min)	75% (min)
% of Control at 28-Days *(previous month's result)*	**81**	%	75% (min)	75% (min)
Water Requirement, Percent of Control	**97**	%	105% (max)	105% (max)
Soundness, Autoclave Expansion	**-0.01**	%	0.8% (max)	0.8% (max)
Density	**2.01**	*g/cm³*	-	-
Density, Variation from Average	**3.40**	%	5% (max)	5% (max)
Fineness Retained 45µm, Variation from Average	**4.20**	%	5% (max)	5% (max)

COMMENTS

We hereby certify that the fly ash represented by the above chemical and physical analyses meets the requirements of ASTM C618-19 and AASHTO M295-11 (2015) for Class F. Testing performed by accredited laboratory in accordance with ASTM C1077-17, AASHTO R18 and Concrete Reference Laboratory (CCRL) certification requirements. Accredited laboratory - Lafarge Seattle, 5400 W Marginal Way SW, Seattle, WA 98106, USA

Report prepared by:

EXL Engineering Inc.

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