FLY ASH TEST REPORT

CSA A3001-18

ENGINEERING INC.

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

Report Date:	August 4, 2022
Project Number:	22-01608-002
Test No.:	ENX-08-2022
Revision:	0

Attention: Mr. Paul Johnson

Test Report Number:	**ENX G3_08-2022_F_CSA**
Year:	**2022**
Month of Analysis:	**August**

FLY ASH SOURCE:	Genesee Generating Station (G3)	SAMPLED BY:	Client
SAMPLE DATE:	July 25, 2022	SAMPLES RECEIVED:	August 1, 2022

CHEMICAL ANALYSIS

TEST DESCRIPTION	TEST RESULTS	UNITS	SPECIFICATION LIMITS		
			TYPE F	TYPE CI	TYPE CH
Silicon Dioxide (SiO_2)	**60.9**	%	-	-	-
Aluminum Oxide (Al_2O_3)	**21.4**	%	-	-	-
Iron Oxide (Fe_2O_3)	**4.7**	%	-	-	-
Total (SiO_2) + (Al_2O_3) + (Fe_2O_3)	**87.0**	%	-	-	-
Sulphur Trioxide (SO_3)	**0.10**	%	5.0% (max)	5.0% (max)	5.0% (max)
Calcium Oxide (CaO)	**6.3**	%	≤ 15%	> 15% - ≤ 20%	> 20%
Magnesium Oxide (MgO)	**1.30**	%	-	-	-
Moisture Content [(1)]	**0.35**	%	3.0% (max)	3.0% (max)	3.0% (max)
Loss on Ignition (LOI)	**1.32**	%	8.0% (max)	6.0% (max)	6.0% (max)
Total Equivalent Alkali Content (Na_2Oeq)	**3.72**	%	-	-	-
Total Available Equivalent Alkali Content (Na_2Oeq)	**-**	%	-	-	-

(1) Optional requirement as per CSA A3001-18 - Table A.3

PHYSICAL ANALYSIS

TEST DESCRIPTION	TEST RESULTS	UNITS	SPECIFICATION LIMITS		
			TYPE F	TYPE CI	TYPE CH
Fineness Retained on 45µm (No. 325 Sieve)	**21.9**	%	34% (max)	34% (max)	34% (max)
Quantity of Air Entrainment	**1.1**	%	-	-	-
Drying Shrinkage (Increase at 28-days)	**0.02**	%	-	-	-
Strength Activity Index with Portland Cement [(2)]					
% of Control at 7-Days	**75**	%	-	-	-
% of Control at 28-Days *(previous month's result)*	**84**	%	75% (min)	75% (min)	75% (min)
Water Requirement, Percent of Control	**96**	%	-	-	-
Soundness, Autoclave Expansion	**0.02**	%	0.8% (max)	0.8% (max)	0.8% (max)
Density	**2.09**	*g/cm³*	-	-	-

(2) Optional requirement as per CSA A3001-18 - Table A.3

COMMENTS

We hereby certify that the fly ash represented by the above chemical and physical analyses meets the requirements of CSA A3001-18 for Type F. Testing performed by accredited laboratory in accordance with CSA A283-19 and Canadian Council of Independent Laboratories (CCIL) certification requirements.

Report prepared by:

EXL Engineering Inc.

Gene Lecuyer, P. Eng.
Senior Materials Engineer

CSA Group

ASTM INTERNATIONAL ORGANIZATIONAL MEMBER

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