

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

Report Date: September 3, 2021
Project Number: 19-01608-002
Test No.: 21ENX-09
Revision: 0

Attention: Mr. Paul Johnson

Test Report Number:	ENX G12-09-21_F_CSA
Year:	2021
Month of Analysis:	September

FLY ASH SOURCE: Genesee Generating Station (G12) SAMPLED BY: Client
SAMPLE DATE: August 23, 2021 SAMPLES RECEIVED: August 27, 2021

CHEMICAL ANALYSIS					
TEST DESCRIPTION	TEST RESULTS	UNITS	SPECIFICATION LIMITS		
			TYPE F	TYPE CI	TYPE CH
Silicon Dioxide (SiO ₂)	62.4	%	-	-	-
Aluminum Oxide (Al ₂ O ₃)	22.4	%	-	-	-
Iron Oxide (Fe ₂ O ₃)	4.1	%	-	-	-
Total (SiO ₂) + (Al ₂ O ₃) + (Fe ₂ O ₃)	88.9	%	-	-	-
Sulphur Trioxide (SO ₃)	0.11	%	5.0% (max)	5.0% (max)	5.0% (max)
Calcium Oxide (CaO)	6.10	%	≤ 15%	> 15% - ≤ 20%	> 20%
Magnesium Oxide (MgO)	1.40	%	-	-	-
Moisture Content ⁽¹⁾	0.13	%	3.0% (max)	3.0% (max)	3.0% (max)
Loss on Ignition (LOI)	0.51	%	8.0% (max)	6.0% (max)	6.0% (max)
Total Equivalent Alkali Content (Na ₂ Oeq)	3.30	%	-	-	-
Total Available Equivalent Alkali Content (Na ₂ Oeq)	-	%	-	-	-

(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)	28.8	%	34% (max)	34% (max)	34% (max)
Quantity of Air Entrainment	1.0	%	-	-	-
Drying Shrinkage (Increase at 28-days)	0.0	%	-	-	-
Strength Activity Index with Portland Cement ⁽²⁾					
% of Control at 7-Days	75	%	-	-	-
% of Control at 28-Days (previous month's result)	82	%	75% (min)	75% (min)	75% (min)
Water Requirement, Percent of Control	98	%	-	-	-
Soundness, Autoclave Expansion	-0.02	%	0.8% (max)	0.8% (max)	0.8% (max)
Density	1.98	g/cm ³	-	-	-

(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



Results pertain only to the sample(s) provided and constitutes a testing service only. Engineering interpretation or evaluation of the test results will be provided upon written request only.