

ASTM C618 / AASHTO M 295 Testing of
Jim Bridger Fly Ash

Sample Type:	3200-ton	Report Date:	9/9/2011
Sample Date:	7/25 - 7/28/11	MTRF ID	1461JB
Sample ID:	BR-057-11-R		

Chemical Analysis		ASTM / AASHTO Limits		ASTM Test Method
		Class F	Class C	
Silicon Dioxide (SiO ₂)	61.82 %			
Aluminum Oxide (Al ₂ O ₃)	19.56 %			
Iron Oxide (Fe ₂ O ₃)	3.83 %			
Sum of Constituents	85.21 %	70.0% min	50.0% min	D4326
Sulfur Trioxide (SO ₃)	0.44 %	5.0% max	5.0% max	D4326
Calcium Oxide (CaO)	4.44 %			D4326
Moisture	0.10 %	3.0% max	3.0% max	C311
Loss on Ignition (AASHTO M 295 req.)	0.58 %	6.0% max 5.0% max	6.0% max 5.0% max	C311
Total Alkalies, as Na ₂ O	3.20 %	5% max Cal Trans		AASHTO T105
Physical Analysis				
Fineness, % retained on #325	19.27 %	34% max	34% max	C311, C430
Fineness Uniformity	1.94 %	5% max	5% max	
Strength Activity Index - 7 or 28 day requirement				C311, C109
7 day, % of control	88 %	75% min	75% min	
28 day, % of control	95 %	75% min	75% min	
Water Requirement, % control	96 %	105% max	105% max	
Autoclave Soundness	0.00 %	0.8% max	0.8% max	C311, C151
Density	2.28			C604
Density Uniformity	0.04 %	5% max	5% max	

Headwaters Resources certifies that pursuant to current ASTM C618 protocol for testing, the test data listed herein was generated by applicable ASTM methods and meets the requirements of ASTM C618 for Class F fly ash.


Bobby Bergman
MTRF Manager

