

Alpha Resources, Inc.

Certificate Of Analysis

AR1933

COAL STANDARD

LOT # TEXLIG896

LID ID TXLIG896

DRIED BASIS VALUE

MEAN WEIGHT % SULFUR	=	0.61
STANDARD DEVIATION	=	0.04
MEAN WEIGHT % ASH	=	7.56
STANDARD DEVIATION	=	0.16
MEAN WEIGHT % VOL. MATTER	=	*36.31
STANDARD DEVIATION*	=	*0.84
BTU*	=	*13,182
EXPANDED UNCERTAINTY	=	*184
FIXED CARBON*	=	*56.13

Methods Employed:

SULFUR	ASTM	D4239
ASH	ASTM	D 3174
VOL. MATTER	ASTM	D 3175, *D7582
BTU	ASTM	D 3286, *D5865, *D240

Notes:

*This certified reference has been reviewed and revised by K.E. Dyer, Technical Manager, on January 22, 2014. Items that have not been changed showed consistent with original certification. The uncertainty for BTU is the expanded uncertainty $k=2$, 95% confidence. Other listed standard deviations represent the $k=1$ 68% confidence limits as originally reported or calculated from the test method.

The certified mean values were statistically derived from the values reported to Alpha Resources through Round Robin.

Normal ASTM procedures should be employed when using this standard. This includes using the *reproducibility* and *repeatability* factors. Use the reproducibility factor when establishing the first set of data, and then establish an internal repeatability factor as your guideline.

The statistical analysis and overall coordination leading to certification was performed by D.M. Reasons at Alpha Resources.

Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Alpha Resources be liable for incidental or consequential damages.

This is a certified reference material (CRM) and should be verified, prior to use, against a primary standard material provided by a governing agency such as N.I.S.T., when available.

EXPIRATION DATE

THIS CRM IS VALID FOR TWO YEARS FROM THE DATE OF OPENING

