



Certificate of Analysis

AR-2783

ULTIMATE COAL CRM

LOT # 783320 LID # 783320

DRIED BASIS VALUES

Table with 3 columns: Proximate Analysis, n=, k=, ASTM, Ultimate Analysis, n=, k=, ASTM. Rows include % Ash, % Volatile Matter, % Fixed Carbon, % Sulfur, and Btu/lb.

Table with 3 columns: Mineral Analysis, n=, k=, ASTM, Sulfur Forms, ASTM, Ash Fusion Temperature, Degrees F, Degrees F. Rows include % Silica, % Alumina, % Titania, % Ferric Oxide, % Calcium Oxide, % Magnesium Oxide, % Potassium Oxide, % Sodium Oxide, % Sulfur Trioxide, % Phosphorus Pentoxide, % Strontium Oxide, % Barium Oxide, % Manganese Oxide, % Undetermined, % Pyritic, % Organic, % Sulfate, and % Chlorine/Fluorine.

REFERENCES USED: Sulfur - NIST SRM 2693, FC28104; BTU - NIST 39j(Benzoic Acid); C/H/N - Phenylalanine, EDTA; Form of Sulfur - QAR-RM-6, LQSI 140022; Mineral Analysis - NIST 634a, 2689, USGS AGV-2; Chlorine - SRM2693, 2682c; Fluorine - 1632d, SARM18.

() Indicates reference only value.

The intended use of this standard is for the verification of various tests by the above-mentioned methods. Typical sample size for analytical testing and minimum size is subject to the test method and instrumentation used. The uncertainty values represent the expanded uncertainty obtained through analytical testing by the mentioned ASTM methods utilizing ANOVA, ISO Guide 35, and the Guide to Uncertainty Measurement.

The material used in production of this standard was identified in accordance with ARI 041. The samples for round-robin testing were selected in accordance with ARI 031. The above values relate only to the material used to produce this standard.

This is a Certified Reference Material (CRM) and is traceable to the above-mentioned references. For good laboratory practice it is recommended that all standards be verified as fit for purpose prior to use.

CERTIFIED April 15, 2020
Updated February 14, 2025

Handwritten signature of Kent Dyer