



Certificate of Analysis

AR-2781

ULTIMATE COAL STANDARD

LOT # 781918

LID # 781918

DRIED BASIS VALUES

Table with 4 columns: Proximate Analysis, ASTM, Ultimate Analysis, and ASTM. Rows include % Ash, % Volatile Matter, % Fixed Carbon, % Sulfur, and Btu/lb.

Table with 4 columns: Mineral Analysis, ASTM, Sulfur Forms, and ASTM. 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, and Undetermined (calculated).

REFERENCES USED: Sulfur - NIST SRM 2683c, NCS FC28011d; BTU - NIST 39j(Benzoic Acid); C/H/N - Phenylalanine, EDTA; Sulfate Sulfur - QAR-RM-6; Mineral Analysis - NIST634a, USGS AGV-2; Chlorine - SRM2693. () indicates reference only value

Notes:

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 material used in production of this standard was prepared and sampled in accordance with ARI 041. The samples for round-robin testing were selected in accordance with ARI 031.

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.

EXPIRATION DATE
THIS CRM IS VALID FOR TWO YEARS FROM THE DATE OF OPENING
CERTIFIED November 29, 2018

Handwritten signature of Kent Dyer