Alpha Resources, Inc.
Certificate Of Analysis

AR-4016
CARBON AND SULFUR IN SOIL
LOT # 101309

% CARBON	% SULFUR
MEAN = 1.87	MEAN = 2.00
ONE SIGMA = 0.08	ONE SIGMA = 0.10
TWO SIGMA = 0.16	TWO SIGMA = 0.20
RANGE = 1.71 to 2.03	RANGE = 1.80 to 2.20

This data was reported using induction and resistance type furnaces with infrared detection. The use of accelerants like vanadium pent-oxide and tungsten oxide were used in the resistance furnace techniques in order to properly release the sulfur.

Standards Employed for traceability:
NCS DC70019 (S), DC73326 (C)

Notes:

The mean analytical values were derived by a number of data sets (n=30). The precision values represent the standard deviation, two times the standard deviation (k=2, 95%confidence), and complete range of analysis. When necessary, professional judgment is applied toward consideration of data and statistical information. The statistical analysis and the overall direction and coordination of the analytical measurements leading to certification were performed by K.E. Dyer at Alpha Resources.

There were limited primary standards of this type of matrix available at the time of certification. Many types of reference materials were used in the certification process, ranging from steel to high purity inorganic for calibration and quality verifications.

The material used in production of this standard was sampled in accordance with ARI 032. The samples for round robin testing were selected in accordance with ARI 014. The above values relate only to the material used to produce this standard.

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 is traceable to the above-mentioned standards. For good laboratory practice it is recommended that all standards be verified prior to use.

Certified October 27, 2009

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