Revised 08/16/2010

Mercury In Coal Standards (25 Grams)

Part #	µg/g Mercury	µg/g Chlorine	Mean Weight % Sulfur	Mean Weight % Ash
AR-3701	0.09	1562	1.04	7.22
AR-3702	0.1	1713	0.77	6.45
AR-3703	0.12	165	0.45	7.64
AR-3704	0.13	107	1.17	10.31
AR-3705	0.19	239	4.71	11.8

C,H,N Coal Standards (25 Grams)

Part #	% CARBON	% HYDROGEN	% NITROGEN
AR-1905	75.99	4.55	1.43
AR-1906	64.22	4.49	1.31
AR-1907	62.99	3.81	1.11
AR-1908	69.96	4.12	1.29

Sulfur Only Coal & Coke Standards (50 Grams)

Part #	% SULFUR	Part #	% SULFUR	Part #	% SULFUR	Part #	% SULFUR
AR-1700	0.29	AR-1707	2.34	AR-719 (COKE)	0.61	AR-2716 (COKE)	2.47
AR-1701	0.53	AR-1708	2.96	AR-720 (COKE)	1.21	AR-2717 (COKE)	2.21
AR-1702	0.74	AR-1709	3.65	AR-723 (COKE)	0.47	AR-2719 (COKE)	2.64
AR-1703	0.85	AR-1710	4.95	AR-2712 (COKE)	0.43	AR-2720 (COKE)	3.99
AR-1704	0.95	AR-1711	5.52	AR-2713 (COKE)	0.58	AR-2721 (COKE)	5.56
AR-1705	1.49	AR-1712	6.27	AR-2714 (COKE)	0.906	AR-2722 (COKE)	2.23
AR-1706	1.91	AR-1713 Lignite	1.18	AR-2715 (COKE)	1.20		

Chlorine In Coal Standards (50 Grams)

Part #	% CHLORINE
AR-1910	0.035
AR-1911	0.16
AR-1912	0.24

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The "Ultimates" (50 Grams)

	AR-2771	AR-2772	AR-2773	AR-2775	AR-2776	AR-2778	AR-2780	AR-2781	AR-2782
% Ash	0.38	9.57	7.33	6.23	11.22	28.67	22.86	17.75	12.03
% Vol.	1.11	0.42	42.96	43.25	24.73	20.14	25.99	18.15	38.22
% Fixed C	98.51	90.01	49.71	50.52	64.05	51.19	51.15	64.17	49.75
BTU	14112	12878	11195	11749	13401	10498	11255	12030	11333
% Sulfur	0.65	0.76	0.56	0.29	0.84	0.68	3.42	1.92	5.06
%Carbon	96.27	87.26	66.91	69.32	76.61	62.34	62.99	70.33	64.22
% Hydrogen	0.09	(0.29)	4.38	4.51	4.46	3.31	3.81	3.40	4.49
% Nitrogen	1.41	1.13	1.00	0.87	1.3	1.01	1.11	1.35	1.31
% Chlorine	0.01	0.02	<0.01	<0.01	NA	0.1	0.16	0.035	NA
%Oxygen	1.2	0.99	19.82	18.78	NA	4.03	NA	5.25	12.89
Sulfur Forms									
% Pyritic	0.01	<0.01	0.03	0.02	0.14	0.10	1.43	0.71	0.76
% Sulfate	0.01	0.76	0.13	0.01	0.11	0.02	0.91	0.12	1.95
% Organic	0.63	<0.01	0.40	0.26	0.59	0.56	1.08	1.09	2.35
Mineral Analysis									
Phosphorus Pentoxide	0.36	0.34	1.29	0.88	1.12	0.19	0.20	0.22	0.12
Silica	25.77	51.60	27.75	34.1	53.20	43.71	49.49	49.81	40.6
Ferric Oxide	32.39	11.74	5.63	5.26	6.61	24.13	18.42	21.10	33.43
Alumina	6.82	28.51	14.64	17.00	30.57	17.10	24.58	21.84	17.08
Titania	0.32	1.54	1.17	1.35	1.24	1.18	1.25	1.03	0.87
Sulfur Trioxide	14.54	0.84	17.82	10.85	0.99	3.40	1.06	0.68	2.09
Potassium Oxide	0.81	1.91	0.26	0.42	2.66	1.46	2.62	2.46	2.08
Sodium Oxide	3.46	0.49	0.47	1.66	0.26	0.24	0.18	0.29	0.21
Calcium Oxide	8.16	1.83	24.02	22.24	2.00	5.85	1.15	0.77	NA
Magnesium Oxide	1.08	0.90	5.99	5.19	0.88	1.29	0.87	0.78	0.93
Strontium Oxide	0.08	0.11	0.42	0.28	0.27	0.05	0.05	0.02	0.01
Barium Oxide	0.21	0.16	0.60	0.69	0.22	0.06	0.09	0.10	0.06
Manganese Oxide	0.41	0.10	0.01	0.01	0.01	0.23	0.03	0.01	0.02
Undetermined	5.59	<0.01	–	0.08	0.00	1.01	0.00	0.50	0.39

Ash Fusion Temperature

	AR-2771	AR-2772	AR-2773	AR-2775	AR-2776	AR-2778	AR-2780	AR-2781	AR-2782
Initial Reducing	2275	2492	2155	2114	2031	2031	2163	2183	1972
Initial Oxidizing	2575	2661	NA	NA	2367	2363	2538	2514	NA
Softening Reducing (H=W)	2340	2611	2165	2125	2052	2074	2370	2240	1988
Softening Oxidizing (H=W)	2632	2700	NA	NA	2392	2404	2589	2549	NA
Softening Reducing (H=1/2W)	2380	2660	2179	2137	2126	2169	2454	2330	2048
Softening Oxidizing (H=1/2W)	2670	2700	NA	NA	2447	2473	2621	2567	NA
Fluid - Reducing	2470	2695	2223	2160	2206	2210	2546	2379	2139
Fluid - Oxidizing	2698	2700	NA	NA	2496	2503	2656	2595	NA

Temperature in Degrees F

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Petroleum Cokes (50 Grams)

Part #	% SULFUR	% ASH	% VOL. MATTER	BTU	FIXED C	% C	% H	%N	% Ni	% Fe	% Va	% Ca	% Si
AR-742B	0.89	0.09	9.67	NA	NA	93.81	3.76	1.27	0.0068	0.0129	0.0022	0.0037	0.0081
AR-744	2.53	0.33	0.45	13,989	99.23	95.58	(0.23)	0.92	0.0164	0.0917	0.0239	0.0079	0.0153
AR-745	0.59	8.00	0.64	12,950	91.36	89.16	0.03	1.29	0.0045	1	0.01	0.12	1.57
AR-747	4.03	0.49	11.87	15,443	87.64	89.70	3.65	1.41	0.0163	0.0185	(0.1165)	0.0251	(0.0284)
AR-748	2.75	0.33	1.31	NA	NA	NA	NA	NA	0.0233	0.0766	0.0289	0.0088	0.0087
AR-756	5.27	0.92	6.52	14,494	NA	89.60	1.66	1.90	0.029	0.0317	0.1675	0.0105	0.0386

Prox Coal And Coke Standards

Part #	% SULFUR	% ASH	% VOL MATTER	BTU	FIXED C
AR-1720	0.32	8.29	39.17	12438	52.54
AR-1721	0.56	7.33	42.96	11195	49.71
AR-1722	0.89	22.14	21.08	11763	56.78
AR-1723	1.02	6.91	36.20	13715	56.89
AR-1724	1.52	4.38	37.21	14239	58.40
AR-1726	1.90	17.74	18.12	12028	64.14
AR-1727	2.34	21.38	28.07	11645	50.51
AR-1728	2.99	8.98	43.01	13260	43.17
AR-1729	3.42	22.88	25.98	11250	51.14
AR1730	4.84	12.03	38.22	12882	49.75
AR-1731	5.51	45.14	20.00	7798	34.86
AR-1732	6.05	19.21	29.75	12214	51.04
AR-1933 LIGNITE	0.61	7.56	38.38	13594	54.06
AR-732	0.59	7.84	0.63	13168	91.53
AR-733	0.66	0.38	0.76	14115	96.37
AR-734	0.76	9.57	0.42	12878	90.01