

AFPC Rock Check Program

Sample No. 2004-05B

	Method #	# of Anal.	Grand Median	Std Dev
Moisture				
Ground Sample AFPC 9-2	101	11	0.77	0.065
Other (describe)	102			
Method Group 100		11	0.77	0.07
BPL or P₂O₅				
Gravimetric AFPC 9-5	201			
ICP-induced coupled plasma	202			
Photometric-AFPC 9-6	203	8	25.10	0.171
Automated -AOAC 978.01-15th	204	4	24.87	0.174
Other(describe)	205			
Method Group 200		12	24.96	0.18
BPL or P₂O₅ (on Dry Basis)				
Gravimetric AFPC 9-5	211			
ICP-induced coupled plasma	212			
Photometric-AFPC 9-6	213	7	25.27	0.154
Automated -AOAC 978.01-15th	214	4	25.06	0.168
Other(describe)	215			
Method Group 210		6	25.07	0.48
Fe₂O₃				
Atomic Absorption-AFPC 9-12,13	301	6	0.95	0.036
ICP-induced coupled plasma	302	5	0.98	0.007
Other(describe)	303	1	0.75	0.000
Method Group 300		12	0.95	0.03
Al₂O₃				
Atomic Absorption-AFPC 9-16,17	401	5	1.09	0.045
ICP-induced coupled plasma	402	5	1.24	0.037
Other(describe)	403	1	2.30	0.000
Method Group 400		11	1.24	0.17
MgO				
Atomic Absorption-AFPC 9-18,19	501	6	0.51	0.015
ICP-induced coupled plasma	502	5	0.55	0.015
Other(describe)	503	1	0.49	0.000
Method Group 500		12	0.53	0.03
Acid Insoluble				
Insoluble-AFPC 9-8	601	12	18.30	1.139
Other(describe)	602			
Method Group 600		12	18.30	1.14
CaO				
Gravimetric sulfate	701			
ICP-induced coupled plasma	702	3	39.55	7.978
Ceric Sulfate volumetric	703			
Permanganate	704	1	38.26	0.000
EDTA Volumetric	705	2	39.39	0.007
Other(describe)	706	4	38.98	0.752
Method Group 700		10	39.37	0.87
CaO (on Dry Basis)				
Gravimetric sulfate	711			
ICP-induced coupled plasma	712	3	39.86	8.046
Ceric Sulfate volumetric	713			
Permanganate	714	1	38.58	0.000
EDTA Volumetric	715	2	39.67	0.002
Other(describe)	716	4	39.18	0.979
Method Group 710		4	38.58	3.91

	Method #	# of Anal.	Grand Median	Std Dev
Fluorine, F				
Volumetric-AFPC 9-37	801			
Specific Ion Electrode	802	4	2.47	0.034
Other (describe)	803			
Method Group 800		4	2.47	0.03
Arsenic, As				
Atomic Absorption	911			
ICP-induced coupled plasma	912	2	11.2	0.26
Other(describe)	913			
Method Group 900		2	11.2	0.26
Cadmium, Cd				
Atomic Absorption	921	2	79	5.2
ICP-induced coupled plasma	922	5	89	0.7
Other(describe)	923			
Method Group 910		7	89	2.4
Cobalt, Co				
Atomic Absorption	931	2	18	5.6
ICP-induced coupled plasma	932	1	25	0.0
Other(describe)	933			
Method Group 920		3	25	5.6
Mercury, Hg				
Atomic Absorption	941			
ICP-induced coupled plasma	942			
Other(describe)	943			
Method Group 930		0	#NUM!	
Molybdenum, Mo				
Atomic Absorption	951			
ICP-induced coupled plasma	952			
Other(describe)	953			
Method Group 940		0	#NUM!	
Nickel, Ni				
Atomic Absorption	961	2	158	15.7
ICP-induced coupled plasma	962	1	179	0.0
Other(describe)	963	1	110	0.0
Method Group 950		4	158	36.4
Lead, Pb				
Atomic Absorption	971	1	14	0.0
ICP-induced coupled plasma	972	3	6	3.4
Other(describe)	973			
Method Group 960		4	10	6.4
Selenium, Se				
Atomic Absorption	981			
ICP-induced coupled plasma	982			
Other(describe)	983			
Method Group 970		0	#NUM!	
Zinc, Zn				
Atomic Absorption	991	2	480	358
ICP-induced coupled plasma	992	1	0	0
Other(describe)	993	1	82	0
Method Group 980		4	41	225

101 Ground Sample AFPC 9-2			
Lab	%	H ₂ O	
10	1.02		-3.829
Std Dev	0.84		-1.000
17	0.83		-0.919
27	0.83		-0.919
10	0.80		-0.383
61	0.79		-0.306
61	0.77		0.000
Median	0.77		0.000
5	0.73		0.613
5	0.73		0.613
9	0.72		0.766
Std Dev	0.70		1.000
9	0.68		1.378
57	0.68		1.378

102 Other (describe)			
Lab	%	H ₂ O	
Median	0.00		0.000

201 Gravimetric AFPC 9-5			
Lab	%	P ₂ O ₅	
Median	0.00		0.000

202 ICP-induced coupled plasma			
Lab	%	P ₂ O ₅	
Median	0.00		0.000

203 Photometric-AFPC 9-6			
Lab	%	P ₂ O ₅	
19	26.50		-8.201
Std Dev	25.27		-1.000
9	25.18		-0.469
5	25.13		-0.176
5	25.10		0.000
9	25.10		0.000
Median	25.10		0.000
61	24.93		0.996
Std Dev	24.93		1.000
61	24.87		1.377
27	24.22		5.155

204 Automated -AOAC 978.01-15th			
Lab	%	P ₂ O ₅	
10	24.99		-0.648
57	24.90		-0.158
Median	24.87		0.000
10	24.85		0.158
Std Dev	24.70		1.000
17	24.22		3.761

205 Other(describe)			
Lab	%	P ₂ O ₅	
Median	0.00		0.000

211 Gravimetric AFPC 9-5			
Lab	%	P ₂ O ₅	dB
Median	0.00		0.000

212 ICP-induced coupled plasma			
Lab	%	P ₂ O ₅	dB
Median	0.00		0.000

213 Photometric-AFPC 9-6			
Lab	%	P ₂ O ₅	dB
9	25.36		-0.589
5	25.31		-0.279
5	25.28		-0.083
9	25.27		0.000
Median	25.27		0.000
61	25.12		0.963
Std Dev	25.12		1.000
61	25.06		1.355
27	24.42		5.511

214 Automated -AOAC 978.01-15th			
Lab	%	P ₂ O ₅	dB
10	25.24		-1.104
Std Dev	25.22		-1.000
57	25.07		-0.079
Median	25.06		0.000
10	25.04		0.079
Std Dev	24.89		1.000
17	24.42		3.784

215 Other(describe)			
Lab	%	P ₂ O ₅	dB
Median	0.00		0.000

301 Atomic Absorption-AFPC 9-12,13			
Lab	%	Fe ₂ O ₃	
5	0.96		-0.275
5	0.95		0.000
27	0.95		0.000
57	0.95		0.000
Median	0.95		0.000
Std Dev	0.91		1.000
10	0.89		1.787
10	0.85		2.749

302 ICP-induced coupled plasma			
Lab	%	Fe ₂ O ₃	
61	1.00		-2.010
61	0.99		-1.340
Std Dev	0.99		-1.000
9	0.98		0.000
9	0.98		0.000
Median	0.98		0.000
Std Dev	0.97		1.000
17	0.95		4.020

303 Other(describe)			
Lab	%	Fe ₂ O ₃	
19	0.75		0.000
Median	0.75		0.000

401 Atomic Absorption-AFPC 9-16,17			
Lab	%	Al ₂ O ₃	
27	1.35		-5.807
Std Dev	1.13		-1.000
5	1.10		-0.223
5	1.09		0.000
Median	1.09		0.000
Std Dev	1.05		1.000
10	1.04		1.117
10	0.99		2.233

402 ICP-induced coupled plasma			
Lab	%	Al ₂ O ₃	

17	1.35		-2.948
61	1.29		-1.340
Std Dev	1.28		-1.000
9	1.24		0.000
9	1.24		0.000
Median	1.24		0.000
61	1.21		0.804

403 Other(describe)			
Lab	%	Al ₂ O ₃	
19	2.30		0.000
Median	2.30		0.000

501 Atomic Absorption-AFPC 9-18,19			
Lab	%	MgO	
27	0.55		-2.513
Std Dev	0.53		-1.000
10	0.53		-0.838
10	0.52		-0.168
Median	0.51		0.000
5	0.51		0.167
5	0.50		0.837
Std Dev	0.50		1.000
57	0.31		13.568

502 ICP-induced coupled plasma			
Lab	%	MgO	
61	0.57		-1.340
Std Dev	0.56		-1.000
61	0.56		-0.670
17	0.55		0.000
Median	0.55		0.000
9	0.54		0.670
Std Dev	0.54		1.000
9	0.53		1.340

503 Other(describe)			
Lab	%	MgO	
19	0.49		0.000
Median	0.49		0.000

601 Insoluble-AFPC 9-8			
Lab	%	Al	
17	24.40		-5.356

27	24.40	-5.356
Std Dev	19.44	-1.000
9	19.02	-0.632
5	18.70	-0.351
5	18.64	-0.299
61	18.30	0.000
61	18.30	0.000
Median	18.30	0.000
9	18.18	0.105
10	17.38	0.808
Std Dev	17.16	1.000
10	16.88	1.251
19	15.70	2.283
57	0.53	15.602

602 Other(describe)			
Lab	%	Al	
Median	0.00		0.000

701 Gravimetric sulfate			
Lab	%	CaO	
Median	0.00		0.000

702 ICP-induced coupled plasma			
Lab	%	CaO	

61	40.18	-0.080
61	39.55	0.000
Median	39.55	0.000
Std Dev	31.57	1.000
57	18.80	2.600

703 Ceric Sulfate volumetric			
Lab	%	CaO	
Median	0.00		0.000

704 Permanganate			
Lab	%	CaO	
27	38.26	0.000	
Median	38.26	0.000	

705 EDTA Volumetric			
Lab	%	CaO	
9	39.40	-1.340	
Std Dev	39.40	-1.000	

Median	39.39	0.000
Std Dev	39.38	1.000
9	39.38	1.340

706 Other(describe)			
Lab	%	CaO	
10	40.04	-1.416	
Std Dev	39.73	-1.000	
10	39.35	-0.499	
Median	38.98	0.000	
19	38.60	0.499	
17	38.26	0.951	

711 Gravimetric sulfate			
Lab	%	CaO	dB
Median	0.00		0.000

712 ICP-induced coupled plasma			
Lab	%	CaO	dB
61	40.49	-0.079	
61	39.86	0.000	
Median	39.86	0.000	
Std Dev	31.81	1.000	
57	18.93	2.601	

713 Ceric Sulfate volumetric			
Lab	%	CaO	dB
Median	0.00		0.000

714 Permanganate			
Lab	%	CaO	dB
27	38.58	0.000	
Median	38.58	0.000	

715 EDTA Volumetric			
Lab	%	CaO	dB
9	39.67	-1.340	
Std Dev	39.67	-1.000	
Median	39.67	0.000	
Std Dev	39.67	1.000	
9	39.67	1.340	

716 Other(describe)			
Lab	%	CaO	dB

10	40.36	-1.209
Std Dev	40.16	-1.000
10	39.76	-0.590
Median	39.18	0.000
19	38.60	0.590
17	38.58	0.610

801 Volumetric-AFPC 9-37			
Lab	%	Fluorine, F	
Median	0.00		0.000

802 Specific Ion Electrode			
Lab	%	Fluorine, F	
9	2.54	-2.233	
Std Dev	2.50	-1.000	
9	2.48	-0.447	
Median	2.47	0.000	
17	2.45	0.447	
27	2.45	0.447	

803 Other(describe)			
Lab	%	Fluorine, F	
Median	0.00		0.000

911 Atomic Absorption-AFPC 9-18,19			
Lab	ppm	Arsenic, As	
Median	0.0		0.000

912 ICP-induced coupled plasma			
Lab	ppm	Arsenic, As	
9	11.5	-1.340	
Std Dev	11.4	-1.000	
Median	11.2	0.000	
Std Dev	10.9	1.000	
9	10.8	1.340	

913 Other(describe)			
Lab	ppm	Arsenic, As	
Median	0.0		0.000

921 Atomic Absorption-AFPC 9-12,13			
Lab	ppm	Cadmium, Cd	
27	86	-1.340	
Std Dev	84	-1.000	

Median	79	0.000
Std Dev	74	1.000
57	72	1.340

922 ICP-induced coupled plasma			
Lab	ppm	Cadmium, Cd	
61	90	-1.608	
Std Dev	90	-1.000	
61	90	-0.670	
9	89	0.000	
Median	89	0.000	
9	89	0.670	
Std Dev	88	1.000	
17	86	4.020	

923 Other(describe)			
Lab	ppm	Cadmium, Cd	
Median	0		0.000

931 Atomic Absorption-AFPC 9-16,17			
Lab	ppm	Cobalt, Co	
27	25	-1.340	
Std Dev	23	-1.000	
Median	18	0.000	
Std Dev	12	1.000	
57	10	1.340	

932 ICP-induced coupled plasma			
Lab	ppm	Cobalt, Co	
17	25	0.000	
Median	25	0.000	

933 Other(describe)			
Lab	ppm	Cobalt, Co	
Median	0		0.000

941 Atomic Absorption-AFPC 9-18,19			
Lab	ppm	Mercury, Hg	
Median	0.0		0.000

942 ICP-induced coupled plasma			
Lab	ppm	Mercury, Hg	
Median	0.0		0.000

943 Other(describe)
Lab ppm Mercury, Hg
Median 0.0 0.000

951 Atomic Absorption-AFPC 9-18,19
Lab ppm Iylybdenum, Mo
Median 0 0.000

952 ICP-induced coupled plasma
Lab ppm Iylybdenum, Mo
Median 0 0.000

953 Other(describe)
Lab ppm Iylybdenum, Mo
Median 0 0.000

961 Atomic Absorption-AFPC 9-12,13
Lab ppm Nickel, Ni
27 179 -1.340
Std Dev 174 -1.000
Median 158 0.000
Std Dev 142 1.000
57 137 1.340

962 ICP-induced coupled plasma
Lab ppm Nickel, Ni
17 179 0.000
Median 179 0.000

963 Other(describe)
Lab ppm Nickel, Ni
19 110 0.000
Median 110 0.000

971 Atomic Absorption-AFPC 9-16,17
Lab ppm Lead, Pb
27 14 0.000
Median 14 0.000

972 ICP-induced coupled plasma
Lab ppm Lead, Pb
17 14 -2.531
Std Dev 9 -1.000
9 6 0.000

Median 6 0.000
9 5 0.149

973 Other(describe)
Lab ppm Lead, Pb
Median 0 0.000

981 Atomic Absorption-AFPC 9-18,19
Lab ppm Selenium, Se
Median 0 0.000

982 ICP-induced coupled plasma
Lab ppm Selenium, Se
Median 0 0.000

983 Other(describe)
Lab ppm Selenium, Se
Median 0 0.000

991 Atomic Absorption-AFPC 9-18,19
Lab ppm Zinc, Zn
57 960 -1.340
Std Dev 838 -1.000
Median 480 0.000
Std Dev 122 1.000
27 0 1.340

992 ICP-induced coupled plasma
Lab ppm Zinc, Zn
17 0 0.000
Median 0 0.000

993 Other(describe)
Lab ppm Zinc, Zn
19 82 0.000
Median 82 0.000

