

AFPC Rock Check Program

Sample No. 2010-11

	Method #	# of Anal.	Grand Median	Std Dev
Moisture				
Ground Sample AFPC IX.2.A	101	15	0.60	0.084
Other (describe)	102	3	0.58	0.028
Method Group 100		18	0.60	0.08
P₂O₅				
Gravimetric AFPC IX.3.B	201	2	29.51	0.045
ICP-induced coupled plasma AFPC IX.3.D	202	1	29.50	0.000
Photometric-AFPC IX.3.C	203	11	29.54	0.069
Automated -AOAC 978.01-15th	204	9	29.63	0.112
Other(describe)	205	1	28.50	0.000
Method Group 200		24	29.54	0.09
P₂O₅ (on Dry Basis)				
Gravimetric AFPC IX.3.B	211	1	29.51	0.000
ICP-induced coupled plasma AFPC IX.3.D	212	1	29.66	0.000
Photometric-AFPC IX.3.C	213	7	29.72	0.055
Automated -AOAC 978.01-15th	214	9	29.82	0.157
Other(describe)	215			
Method Group 210		17	29.72	0.12
Fe₂O₃				
Atomic Absorption-AFPC IX.6.B	301	2	0.50	0.026
ICP-induced coupled plasma-AFPC IX.6.C	302	20	0.51	0.016
Other(describe)	303	1	0.45	0.000
Method Group 300		23	0.51	0.02
Al₂O₃				
Atomic Absorption-AFPC IX.7.B	401	1	1.08	0.000
ICP-induced coupled plasma-AFPC IX.7.C	402	19	0.78	0.179
Other(describe)	403	1	1.60	0.000
Method Group 400		21	0.79	0.29
MgO				
Atomic Absorption-AFPC IX.8.A	501	2	0.40	0.022
ICP-induced coupled plasma-AFPC IX.8.B	502	20	0.40	0.012
Other(describe)	503	1	0.42	0.000
Method Group 500		23	0.40	0.01
Acid Insoluble				
Insoluble-AFPC IX.4.A	601	14	12.79	0.134
Other(describe)	602	1	13.10	0.000
Method Group 600		15	12.81	0.20
Carbon Dioxide				
Gasometric-AFPC IX.13.B	651	10	3.39	0.230
Other(describe)	652	4	6.09	4.002
Method Group 650		14	3.41	0.13
CaO				
Gravimetric sulfate-AFPC IX.12.A	701			
ICP-induced coupled plasma-AFPC IX.12.D	702	12	43.94	0.710
Ceric Sulfate volumetric-AFPC IX.12.B	703			
Permanganate	704	4	43.29	0.657
EDTA Volumetric-AFPC IX.12.C	705			
Other(describe)	706	7	43.40	0.256
Method Group 700		23	43.54	0.48
CaO (on Dry Basis)				
Gravimetric sulfate-AFPC IX.12.A	711			
ICP-induced coupled plasma-AFPC IX.12.D	712	8	43.86	0.220
Ceric Sulfate volumetric-AFPC IX.12.B	713			
Permanganate	714	3	43.95	0.457
EDTA Volumetric-AFPC IX.12.C	715			
Other(describe)	716	6	43.69	0.036
Method Group 710		12	43.76	0.17

	Method #	# of Anal.	Grand Median	Std Dev
Fluorine, F				
Volumetric-AFPC IX.14.A	801			
Specific Ion Electrode-AFPC IX.14.B	802	14	3.08	0.108
Other (describe)	803	3	3.01	0.194
Method Group 800		17	3.07	0.08
Arsenic, As				
Atomic Absorption	911			
ICP-induced coupled plasma-AFPC IX.15.B	912	6	11.6	3.18
Other(describe)	913	1	8.2	0.00
Method Group 900		7	11.4	3.42
Cadmium, Cd				
Atomic Absorption-AFPC IX.11.A	921			
ICP-induced coupled plasma-AFPC IX.11.B	922	6	86	2.7
Other(describe)	923	1	87	0.0
Method Group 910		7	87	2.3
Cobalt, Co				
Atomic Absorption-AFPC IX.16.B	931			
ICP-induced coupled plasma-AFPC IX.16.A	932	7	2	0.4
Other(describe)	933	1	2	0.0
Method Group 920		8	2	0.2
Mercury, Hg				
Atomic Absorption-AFPC IX.16.B	941			
ICP-induced coupled plasma-AFPC IX.16.A	942	1		0.00
Other(describe)	943	1	1.2	0.00
Method Group 930		2	0.6	0.43
Molybdenum, Mo				
Atomic Absorption-AFPC IX.16.B	951			
ICP-induced coupled plasma-AFPC IX.16.A	952	7	7	1.1
Other(describe)	953	1	8	0.0
Method Group 940		8	7	1.0
Nickel, Ni				
Atomic Absorption-AFPC IX.16.B	961			
ICP-induced coupled plasma-AFPC IX.16.A	962	6	83	7.7
Other(describe)	963	2	62	10.5
Method Group 950		8	78	8.9
Lead, Pb				
Atomic Absorption-AFPC IX.16.B	971			
ICP-induced coupled plasma-AFPC IX.16.A	972	6	5	2.6
Other(describe)	973	1	5	0.0
Method Group 960		7	5	1.9
Selenium, Se				
Atomic Absorption-AFPC IX.16.B	981			
ICP-induced coupled plasma-AFPC IX.16.A	982	4	7	3.9
Other(describe)	983	1	11	0.0
Method Group 970		5	10	3.9
Zinc, Zn				
Atomic Absorption-AFPC IX.16.B	991	1	685	0
ICP-induced coupled plasma-AFPC IX.16.A	992	7	651	45
Other(describe)	993	2	629	25
Method Group 980		10	657	50

101 Ground Sample AFPC IX.2.A			
Lab	%	H ₂ O	
10	0.73		-1.489
13	0.71		-1.310
24	0.70		-1.191
10	0.69		-1.012
Std Dev	0.68		-1.000
9	0.66		-0.655
9	0.66		-0.655
13	0.61		-0.119
49	0.60		0.000
Median	0.60		0.000
15	0.59		0.119
15	0.57		0.417
24	0.57		0.417
6	0.55		0.596
Std Dev	0.52		1.000
30	0.49		1.310
77	0.35		2.978
77	0.22		4.526

102 Other (describe)			
Lab	%	H ₂ O	
21	0.63		-1.608
Std Dev	0.61		-1.000
21	0.58		0.000
Median	0.58		0.000
Std Dev	0.55		1.000
	0.55		1.072

201 Gravimetric AFPC IX.3.B			
Lab	%	P2O5	
50	29.57		-1.340
Std Dev	29.55		-1.000
Median	29.51		0.000
Std Dev	29.47		1.000
77	29.45		1.340

202 ICP-induced coupled plasma AFPC IX.3.D			
Lab	%	P2O5	
6	29.50		0.000
Median	29.50		0.000

203 Photometric-AFPC IX.3.C			
Lab	%	P2O5	

270	30.14		-8.692
10	29.62		-1.159
Std Dev	29.61		-1.000
60	29.60		-0.869
9	29.59		-0.652
10	29.54		0.000
49	29.54		0.000
Median	29.54		0.000
	29.53		0.145
9	29.50		0.579
78	29.50		0.579
Std Dev	29.47		1.000
78	29.45		1.304
30	29.27		3.911

204 Automated -AOAC 978.01-15th			
Lab	%	P2O5	
15	30.23		-5.315
15	30.19		-4.958
Std Dev	29.74		-1.000
13	29.67		-0.357
24	29.64		-0.045
21	29.63		0.000
Median	29.63		0.000
13	29.54		0.804
77	29.52		0.983
Std Dev	29.52		1.000
21	29.50		1.161
24	29.48		1.385

205 Other (describe)			
Lab	%	P2O5	
19	28.50		0.000
Median	28.50		0.000

211 Gravimetric AFPC IX.3.B			
Lab	%	P2O5	dB
77	29.51		0.000
Median	29.51		0.000

212 ICP-induced coupled plasma AFPC IX.3.D			
Lab	%	P2O5	dB
6	29.66		0.000
Median	29.66		0.000

213 Photometric-AFPC IX.3.C			
Lab	%	P2O5	dB
10	29.82		-1.920
9	29.78		-1.118
Std Dev	29.77		-1.000
10	29.76		-0.678
49	29.72		0.000
Median	29.72		0.000
9	29.69		0.431
	29.69		0.453
Std Dev	29.66		1.000
30	29.41		5.509

214 Automated -AOAC 978.01-15th			
Lab	%	P2O5	dB
15	30.40		-3.751
15	30.36		-3.446
Std Dev	29.97		-1.000
13	29.88		-0.420
24	29.84		-0.176
21	29.82		0.000
Median	29.82		0.000
13	29.72		0.606
21	29.67		0.920
Std Dev	29.66		1.000
24	29.64		1.109
77	29.62		1.229

215 Other (describe)			
Lab	%	P2O5	dB
Median	0.00		0.000

301 Atomic Absorption-AFPC IX.6.B			
Lab	%	Fe2O3	
30	0.53		-1.340
Std Dev	0.52		-1.000
Median	0.50		0.000
Std Dev	0.47		1.000
60	0.46		1.340

302 ICP-induced coupled plasma-AFPC IX.6.C			
Lab	%	Fe2O3	
77	0.57		-3.784
77	0.56		-3.153
78	0.55		-2.522

78	0.55		-2.522
Std Dev	0.53		-1.000
15	0.53		-0.946
15	0.52		-0.631
49	0.52		-0.631
50	0.51		-0.126
10	0.51		0.000
10	0.51		0.000
13	0.51		0.000
270	0.51		0.000
Median	0.51		0.000
9	0.51		0.315
6	0.50		0.631
9	0.50		0.631
13	0.50		0.631
Std Dev	0.49		1.000
24	0.48		1.892
24	0.47		2.522
21	0.43		5.045
21	0.41		6.621

303 Other (describe)			
Lab	%	Fe2O3	
19	0.45		0.000
Median	0.45		0.000

401 Atomic Absorption-AFPC IX.6.B			
Lab	%	Al2O3	
30	1.08		0.000
Median	1.08		0.000

402 ICP-induced coupled plasma-AFPC IX.6.C			
Lab	%	Al2O3	
78	1.77		-5.528
78	1.70		-5.109
77	1.55		-4.299
77	1.55		-4.299
Std Dev	0.96		-1.000
15	0.93		-0.838
15	0.93		-0.838
270	0.82		-0.223
9	0.82		-0.195
49	0.79		-0.056
9	0.78		0.000

Median	0.78	0.000
6	0.77	0.056
24	0.74	0.223
24	0.72	0.335
10	0.69	0.503
21	0.69	0.503
10	0.69	0.530
13	0.65	0.726
13	0.62	0.893
Std Dev	0.60	1.000
21	0.59	1.089

403 Other(describe)			
Lab	%	Al2O3	
19	1.60		0.000
Median	1.60		0.000

501 Atomic Absorption-AFPC IX.8.A			
Lab	%	MgO	
30	0.43		-1.340
Std Dev	0.42		-1.000
Median	0.40		0.000
Std Dev	0.38		1.000
60	0.37		1.340

502 ICP-induced coupled plasma-AFPC IX.8.B			
Lab	%	MgO	
78	0.44		-3.298
15	0.42		-1.649
78	0.42		-1.649
50	0.41		-1.072
Std Dev	0.41		-1.000
15	0.41		-0.825
49	0.41		-0.825
270	0.41		-0.825
9	0.41		-0.412
10	0.41		-0.412
6	0.40		0.000
9	0.40		0.000
13	0.40		0.000
77	0.40		0.000
77	0.40		0.000
Median	0.40		0.000
10	0.40		0.412

13	0.39	0.825
24	0.39	0.825
Std Dev	0.39	1.000
24	0.39	1.237
21	0.36	3.298
21	0.34	5.360

503 Other(describe)			
Lab	%	MgO	
19	0.42		0.000
Median	0.42		0.000

601 Insoluble-AFPC IX.4.A			
Lab	%	Al	
15	15.10		-17.178
15	15.10		-17.141
30	13.35		-4.150
Std Dev	12.93		-1.000
13	12.92		-0.949
10	12.91		-0.875
21	12.83		-0.242
21	12.81		-0.093
Median	12.79		0.000
9	12.78		0.093
9	12.76		0.242
24	12.75		0.354
24	12.74		0.428
10	12.70		0.689
Std Dev	12.66		1.000
6	12.60		1.433
13	12.22		4.262

602 Other(describe)			
Lab	%	Al	
19	13.10		0.000
Median	13.10		0.000

651 Gasometric-AFPC IX.13.B			
Lab	%	CO2	
9	3.46		-0.282
13	3.44		-0.217
77	3.43		-0.174
9	3.41		-0.065
30	3.40		-0.043
Median	3.39		0.000

77	3.38	0.043
13	3.22	0.738
Std Dev	3.16	1.000
15	3.08	1.345
15	3.07	1.389
49	2.80	2.561

652 Other(describe)			
Lab	%	CO2	
78	8.87		-0.694
78	8.76		-0.667
Median	6.09		0.000
21	3.42		0.667
21	3.42		0.667

701 Gravimetric sulfate-AFPC IX.12.A			
Lab	%	CaO	
Median	0.00		0.000

702 ICP-induced coupled plasma-AFPC IX.12.D			
Lab	%	CaO	
78	46.16		-3.120
78	45.72		-2.507
77	44.78		-1.183
Std Dev	44.65		-1.000
50	44.38		-0.620
77	44.33		-0.549
270	44.24		-0.423
Median	43.94		0.000
49	43.64		0.423
10	43.61		0.465
9	43.54		0.571
6	43.51		0.606
10	43.45		0.697
9	43.42		0.740

703 Ceric Sulfate volumetric-AFPC IX.12.B			
Lab	%	CaO	
Median	0.00		0.000

704 Permanganate			
Lab	%	CaO	
21	43.85		-0.853
21	43.68		-0.594

Median	43.29	0.000
60	42.90	0.594
30	42.67	0.944

705 EDTA Volumetric-AFPC IX.12.C			
Lab	%	CaO	
Median	0.00		0.000

706 Other(describe)			
Lab	%	CaO	
24	43.55		-0.587
15	43.47		-0.254
15	43.46		-0.215
13	43.40		0.000
Median	43.40		0.000
24	43.38		0.098
Std Dev	43.14		1.000
13	42.86		2.113
19	42.10		5.086

711 Gravimetric sulfate-AFPC IX.12.A			
Lab	%	CaO	dB
Median	0.00		0.000

712 ICP-induced coupled plasma-AFPC IX.12.			
Lab	%	CaO	dB
77	44.88		-4.613
77	44.49		-2.828
Std Dev	44.08		-1.000
10	43.91		-0.218
49	43.90		-0.185
Median	43.86		0.000
9	43.82		0.185
10	43.76		0.456
6	43.75		0.509
9	43.70		0.733

713 Ceric Sulfate volumetric-AFPC IX.12.B			
Lab	%	CaO	dB
Median	0.00		0.000

714 Permanganate			
Lab	%	CaO	dB
21	44.11		-0.330

21	43.95	0.000
Median	43.95	0.000
Std Dev	43.50	1.000
30	42.88	2.350

715 EDTA Volumetric-AFPC IX.12.C			
Lab	%	CaO	dB
Median	0.00		0.000

716 Other(describe)			
Lab	%	CaO	dB
24	43.80		-2.979
Std Dev	43.73		-1.000
15	43.72		-0.888
15	43.70		-0.297
Median	43.69		0.000
24	43.68		0.297
13	43.67		0.701
Std Dev	43.66		1.000
13	43.17		14.733

801 Volumetric-AFPC IX.14.A			
Lab	%	Fluorine, F	
Median	0.00		0.000

802 Specific Ion Electrode-AFPC IX.14.B			
Lab	%	Fluorine, F	
30	3.25		-1.594
30	3.25		-1.594
15	3.19		-1.040
Std Dev	3.19		-1.000
15	3.19		-0.993
270	3.13		-0.485
13	3.08		-0.023
24	3.08		-0.023
Median	3.08		0.000
21	3.08		0.023
49	3.06		0.162
9	3.03		0.439
24	3.03		0.485
13	3.02		0.531
21	3.02		0.531
9	2.99		0.809

803 Other(describe)			
Lab	%	Fluorine, F	
77	3.07		-0.309
77	3.01		0.000
Median	3.01		0.000
Std Dev	2.82		1.000
19	2.55		2.371

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

912 ICP-induced coupled plasma-AFPC IX.15.B			
Lab	ppm	Arsenic, As	
270	12.0		-0.126
77	11.8		-0.063
77	11.8		-0.063
Median	11.6		0.000
6	11.4		0.063
Std Dev	8.4		1.000
78	6.3		1.682
78	6.2		1.713

913 Other(describe)			
Lab	ppm	Arsenic, As	
13	8.2		0.000
Median	8.2		0.000

921 Atomic Absorption-AFPC IX.11.A			
Lab	ppm	Cadmium, Cd	
Median	0		0.000

922 ICP-induced coupled plasma-AFPC IX.11.B			
Lab	ppm	Cadmium, Cd	
78	91		-1.842
78	89		-1.160
Std Dev	89		-1.000
77	87		-0.332
Median	86		0.000
6	85		0.332
77	85		0.405
270	85		0.497

923 Other(describe)		
Lab	ppm	Cadmium, Cd
13	87	0.000
Median	87	0.000

931 Atomic Absorption-AFPC IX.16.B		
Lab	ppm	Cobalt, Co
Median	0	0.000

932 ICP-induced coupled plasma-AFPC IX.16.A		
Lab	ppm	Cobalt, Co
50	2	-1.276
78	2	-1.276
Std Dev	2	-1.000
78	2	0.000
270	2	0.000
Median	2	0.000
6	1	0.128
Std Dev	1	1.000
77	1	1.276
77	1	2.297

933 Other(describe)		
Lab	ppm	Cobalt, Co
13	2	0.000
Median	2	0.000

941 Atomic Absorption-AFPC IX.16.B		
Lab	ppm	Mercury, Hg
Median	0.0	0.000

942 ICP-induced coupled plasma-AFPC IX.16.A		
Lab	ppm	Mercury, Hg
270	0.0	0.000
Median	0.0	0.000

943 Other(describe)		
Lab	ppm	Mercury, Hg
13	1.2	0.000
Median	1.2	0.000

951 Atomic Absorption-AFPC IX.16.B		
Lab	ppm	Molybdenum, Mo
Median	0	0.000

952 ICP-induced coupled plasma-AFPC IX.16..		
Lab	ppm	Iolybdenum, Mo
50	9	-1.796
6	8	-1.411
270	8	-1.128
Std Dev	8	-1.000
78	7	0.000
Median	7	0.000
78	7	0.047
77	7	0.094
77	7	0.188

953 Other(describe)		
Lab	ppm	Iolybdenum, Mo
13	8	0.000
Median	8	0.000

961 Atomic Absorption-AFPC IX.16.B		
Lab	ppm	Nickel, Ni
Median	0	0.000

962 ICP-induced coupled plasma-AFPC IX.16..		
Lab	ppm	Nickel, Ni
78	87	-0.484
270	86	-0.420
78	86	-0.355
Median	83	0.000
6	80	0.355
Std Dev	75	1.000
77	74	1.130
77	73	1.259

963 Other(describe)		
Lab	ppm	Nickel, Ni
13	76	-1.340
Std Dev	73	-1.000
Median	62	0.000
Std Dev	52	1.000
19	48	1.340

971 Atomic Absorption-AFPC IX.16.B		
Lab	ppm	Lead, Pb
Median	0	0.000

972 ICP-induced coupled plasma-AFPC IX.16.A			
Lab	ppm	Lead, Pb	
270	10		-2.010
6	9		-1.551
Std Dev	7		-1.000
78	5		-0.096
Median	5		0.000
78	5		0.096
77	4		0.172
77	4		0.325

973 Other(describe)			
Lab	ppm	Lead, Pb	
13	5		0.000
Median	5		0.000

981 Atomic Absorption-AFPC IX.16.B			
Lab	ppm	Selenium, Se	
Median	0		0.000

982 ICP-induced coupled plasma-AFPC IX.16.A			
Lab	ppm	Selenium, Se	
6	10		-0.670
270	10		-0.670
Median	7		0.000
77	5		0.670
77	5		0.670

983 Other(describe)			
Lab	ppm	Selenium, Se	
13	11		0.000
Median	11		0.000

991 Atomic Absorption-AFPC IX.16.B			
Lab	ppm	Zinc, Zn	
60	685		0.000
Median	685		0.000

992 ICP-induced coupled plasma-AFPC IX.16.A			
Lab	ppm	Zinc, Zn	
270	1212		-12.425
50	706		-1.218
Std Dev	696		-1.000

78	666		-0.332
78	651		0.000
Median	651		0.000
6	649		0.044
Std Dev	606		1.000
77	602		1.085
77	601		1.107

993 Other(describe)			
Lab	ppm	Zinc, Zn	
13	662		-1.340
Std Dev	654		-1.000
Median	629		0.000
Std Dev	604		1.000
19	595		1.340

