

AFPC

Sample

2018-05

Grade

18-46-0

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
AMMONIACAL NITROGEN					
Ammoniacal Nitrogen, MgO distillation	920.03	001.10	1	17.00	0.00
Ammoniacal Nitrogen, Other		001.99	12	16.93	0.09
Method Group 001.XX PCT			13	16.94	0.11
TOTAL NITROGEN					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	17.25	0.15
Total Nitrogen, Combustion	993.13	010.60	21	17.79	0.21
Total Nitrogen, Other		010.99	6	17.66	0.20
Method Group 010.XX PCT			30	17.74	0.27
TOTAL PHOSPHATE					
Total Phosphate, Gravimetric Quimociac		020.10	2	48.02	1.28
Total Phosphate, Spectrometric	978.02	020.20	22	45.89	0.15
Total Phosphate, ICP	970.03	020.40	2	45.87	0.05
Total Phosphate, Other	993.13	020.99	1	46.38	0.00
Method Group 020.XX PCT			27	45.92	0.23
INSOLUBLE PHOSPHATE					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	7	0.07	0.03
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.03	0.00
Insoluble Phosphate, Automated	978.01	030.40	1	0.08	0.00
Insoluble Phosphate, Other		030.99	2	0.09	0.01
Method Group 030.XX PCT			11	0.07	0.04
INDIRECT AVAILABLE PHOSPHATE					
Indirect Available Phosphate, Spectrometric	960.02	040.20	12	45.81	0.12
Indirect Available Phosphate, Other		040.99	1	46.02	0.00
Method Group 040.XX PCT			13	45.83	0.15
DIRECT AVAILABLE PHOSPHATE					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	2	45.73	0.27
Direct Available Phosphate, Spectrometric	960.03D	041.20	1	45.52	0.00
Direct Available Phosphate, ICP		041.50	3	45.65	1.87
Direct Available Phosphate, EDTA Extract	993.01	041.60	3	46.70	0.19
Direct Available Phosphate, Other		041.99	2	46.26	0.14
Method Group 041.XX PCT			11	46.10	0.90
WATER SOLUBLE PHOSPHATE					
Water Soluble Phosphate, Gravimetric Quimociac	962.03	048.10	1	41.04	0.00
Water Soluble Phosphate, Spectrometric	970.01	048.20	13	41.07	0.47
Water Soluble Phosphate, ICP		048.50	1	39.74	0.00
Water Soluble Phosphate, Other		048.99	3	41.27	0.07
Method Group 048.XX PCT			18	41.10	0.50
SOLUBLE POTASH AS K₂O					
Soluble Potash, ICP(Oxalate)		050.50	3	0.09	0.01
Soluble Potash, Other		050.99	10	0.10	0.01
Method Group 050.XX PCT			13	0.10	0.01
FREE WATER					
Free Water, Vacuum Oven	965.08B	060.00	16	2.58	0.21
Free Water, Other		060.99	6	2.62	0.27
Method Group 060.XX PCT			22	2.58	0.26
ACID SOLUBLE CALCIUM AS CaO					
Acid Soluble Calcium, Atomic Absorption	945.04	101.00	1	0.15	0.00
Acid Soluble Calcium, ICP		101.30	16	0.23	0.02
Method Group 101.XX PCT			17	0.23	0.02
ACID SOLUBLE MAGNESIUM AS MgO					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	1.57	0.00
Acid Soluble Magnesium, ICP		121.30	14	1.53	0.06
Acid Soluble Magnesium, Other		121.99	2	1.45	0.03
Method Group 121.XX PCT			17	1.53	0.08

AFPC Check Sample 05-2018 **WATER SOLUBLE MAGNESIUM**

Water Soluble Magnesium, Other		131.99	1		0.00
Method Group 131.XX PCT			1	0.00	0.00
SULFATE SULFUR (S)					
Sulfur, Gravimetric	980.02(a)	144.01	1	1.31	0.00
Sulfur, Other		144.99	13	1.28	0.02
Method Group 144.XX PCT			14	1.28	0.03
TOTAL SULFUR (S)					
Sulfur, Other		145.99	4	1.28	2.2
Method Group 145.XX PCT			4	1.28	2.7
TOTAL ARSENIC					
Total Arsenic, Atomic Absorbtion	980.02(a)	151.01	1	13	0.0
Total Arsenic, ICP	980.02(b)	151.02	6	18.4	1.4
Total Arsenic, Other		151.99	3	18.4	0.7
Method Group 151.XX PPM			10	18.1	1.5
ACID SOLUBLE BORON					
Acid Soluble Boron, Other		165.99	4	86	60.6
Method Group 165.XX PPM			4	86	73.8
WATER SOLUBLE BORON					
Water Soluble Boron, Other		171.99	1	34	0.0
Method Group 171.XX PPM			1	34	0.0
TOTAL CADMIUM					
Total Cadmium, Atomic Absorbtion		181.00	1	4	0.0
Total Cadmium, ICP		181.30	10	3.7	0.4
Total Cadmium, Other		181.99	3	3.3	0.6
Method Group 181.XX PPM			14	3.7	0.6
ALUMINUM AS Al₂O₃					
ICP, %			16	1.21	0.03
Water Soluble Chlorine, Other, %		190.99	2	1.19	0.03
Method Group 190.XX PCT			18	1.21	0.04
TOTAL CHROMIUM					
Total Chromium, Atomic Absorbtion		191.00	1	81	0.0
Total Chromium, ICP		191.30	12	96	2.6
Total Chromium, Other		191.99	2	109	8.1
Method Group 191.XX PPM			15	96	4.9
ACID SOLUBLE COBALT					
Acid Soluble Cobalt, ICP		202.30	7	4	0.7
Acid Soluble Cobalt, Other		202.99	1	4	0.0
Method Group 202.XX PPM			8	4	0.7
ACID SOLUBLE COPPER					
Acid Soluble Copper, Other		221.99	1	0.9	0.0
Method Group 221.XX PPM			8	2.2	1.0
ACID SOLUBLE IRON AS Fe₂O₃					
Acid Soluble Iron, ICP		241.30	16	1.88	0.03
Acid Soluble Iron, Other		241.99	2	1.74	0.04
Method Group 241.XX PCT			19	1.87	0.05
TOTAL LEAD					
Total Lead, ICP		251.30	11	1.8	0.6
Total Lead, Other		251.99	1	1.9	0.0
Method Group 251.XX PPM			12	1.8	0.6
ACID SOLUBLE MANGANESE					
Acid Soluble Manganese, ICP	972.02a	261.30	2	281	17.4
Acid Soluble Manganese, Other		261.99	9	302	11.9
Method Group 261.XX PPM			11	302	15.9
WATER SOLUBLE MANGANESE					
Water Soluble Manganese, Other		271.99	1	28	0
Method Group 271.XX PCT			1	28	0.0
TOTAL MERCURY					
Total Mercury, ICP		281.30	2	0.00	105.59
Total Mercury, Other		281.99	2	0	0.00

Method Group 281.XX PPM			4	0.01	64.32
TOTAL MOLYBDENUM					
Total Molybdenum, ICP	289.30		8	10	0.8
Total Molybdenum, Other	289.99		1	7	0.0
Method Group 289.XX PPM			9	9	1.1
TOTAL NICKEL					
Total Nickel, ICP	291.30		10	17.5	0.5
Total Nickel, icp	291.99		2	14.7	3.0
Method Group 291.XX PPM			12	17.5	0.7
TOTAL SELENIUM					
Total Selenium, ICP	301.30		6	0.4	0.3
Method Group 301.XX PPM			6	0.4	0.4
SODIUM AS Na₂O					
Sodium, Atomic Absorbtion	983.04	311.00	1	0.30	0.00
Sodium, Other		311.99	10	0.23	0.01
Method Group 311.XX PCT			11	0.23	0.02
ACID SOLUBLE ZINC					
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	1	52.3	0.0
Acid Soluble Zinc, ICP		321.30	6	43.8	4.4
Acid Soluble Zinc, Other		321.99	4	54.5	14.4
Method Group 321.XX %			11	45.0	13.1
FLUORIDE					
Volumetric	325.10		11	1.85	0.09
Distilled/Electrode	325.99		4	1.87	0.15
Method Group 325.XX PCT			15	1.85	0.17

001.10 Ammoniacal Nitrogen		
Lab	MgO distillation	
31	17.00	0.000
Median	17.00	0.000

001.99 Ammoniacal Nitrogen		
Lab	Other	
335	17.47	-5.940
113	17.28	-3.840
Std Dev	17.02	-1.000
24	17.00	-0.746
79	17.00	-0.746
34	16.95	-0.138
24	16.94	-0.083
Median	16.93	0.000
61	16.93	0.083
32	16.88	0.580
61	16.88	0.580
32	16.88	0.635
Std Dev	16.84	1.000
140	16.83	1.133
330	16.39	5.995

001.XX Ammoniacal Nitrogen		
Lab	Total Method	
335	17.47	-5.918
113	17.28	-3.797
Std Dev	17.03	-1.000
24	17.00	-0.670
79	17.00	-0.670
31	17.00	-0.614
34	16.95	-0.056
24	16.94	0.000
Median	16.94	0.000
61	16.93	0.168
32	16.88	0.670
61	16.88	0.670
32	16.88	0.726
Std Dev	16.85	1.000
140	16.83	1.228
330	16.39	6.142

010.11 Total Nitrogen		
Lab	Modified Comprehensive	

219	17.64	-2.612
Std Dev	17.40	-1.000
43	17.25	0.000
Median	17.25	0.000
43	17.24	0.068

010.60 Total Nitrogen		
Lab	Combustion	
24	18.00	-1.023
Std Dev	18.00	-1.000
49	17.95	-0.780
63	17.93	-0.682
66	17.91	-0.585
237	17.89	-0.487
24	17.87	-0.365
79	17.84	-0.244
219	17.84	-0.244
47	17.82	-0.122
110	17.80	-0.049
111	17.79	0.000
Median	17.79	0.000
31	17.77	0.122
140	17.71	0.414
61	17.61	0.901
14	17.60	0.926
77	17.59	0.975
Std Dev	17.58	1.000
80	17.55	1.169
103	17.52	1.340
14	17.51	1.364
29	17.42	1.803
99	17.17	3.045

010.99 Total Nitrogen		
Lab	Other	
23	17.82	-0.785
113	17.81	-0.735
23	17.78	-0.586
Median	17.66	0.000
32	17.55	0.586
32	17.53	0.661
Std Dev	17.46	1.000
330	16.87	3.951

010.XX Total Nitrogen		
Lab	Total Method	
24	18.00	-1.179
Std Dev	17.96	-1.000
49	17.95	-0.956
63	17.93	-0.867
66	17.91	-0.778
237	17.89	-0.689
24	17.87	-0.578
79	17.84	-0.467
219	17.84	-0.467
23	17.82	-0.378
47	17.82	-0.356
113	17.81	-0.334
110	17.80	-0.289
111	17.79	-0.245
23	17.78	-0.200
31	17.77	-0.133
Median	17.74	0.000
140	17.71	0.133
219	17.64	0.445
61	17.61	0.578
14	17.60	0.600
77	17.59	0.645
80	17.55	0.823
32	17.55	0.845
32	17.53	0.912
103	17.52	0.979
Std Dev	17.51	1.000
14	17.51	1.001
29	17.42	1.401
43	17.25	2.157
43	17.24	2.202
99	17.17	2.535
330	16.87	3.848

020.10 Total Phosphate		
Lab	Gravimetric Quimociac	
113	49.73	-1.340
Std Dev	49.29	-1.000
Median	48.02	0.000
Std Dev	46.74	1.000
219	46.31	1.340

020.20 Total Phosphate		
Lab	Spectrometric	
110	48.00	-14.407
14	46.60	-4.848
14	46.14	-1.673
34	46.09	-1.366
275	46.08	-1.297
Std Dev	46.04	-1.000
140	46.03	-0.956
31	46.02	-0.888
61	46.02	-0.854
23	45.93	-0.273
275	45.92	-0.205
23	45.90	-0.034
Median	45.89	0.000
79	45.89	0.034
99	45.88	0.068
32	45.88	0.102
24	45.84	0.376
32	45.84	0.376
61	45.83	0.410
24	45.78	0.785
111	45.75	0.956
Std Dev	45.74	1.000
237	45.70	1.297
43	45.64	1.741
43	45.43	3.175

020.40 Total Phosphate		
Lab	Automated	
219	45.94	-1.340
Std Dev	45.92	-1.000
Median	45.87	0.000
Std Dev	45.82	1.000
111	45.81	1.340

020.99 Total Phosphate		
Lab	Other	
330	46.38	0.000
Median	46.38	0.000

020.XX Total Phosphate		
Lab	Total Method	
113	49.73	-20.193

110	48.00	-11.038
14	46.60	-3.609
330	46.38	-2.441
219	46.31	-2.043
14	46.14	-1.141
Std Dev	46.11	-1.000
34	46.09	-0.902
275	46.08	-0.849
140	46.03	-0.584
31	46.02	-0.531
61	46.02	-0.504
219	45.94	-0.106
23	45.93	-0.053
275	45.92	0.000
Median	45.92	0.000
23	45.90	0.133
79	45.89	0.186
99	45.88	0.212
32	45.88	0.239
24	45.84	0.451
32	45.84	0.451
61	45.83	0.478
111	45.81	0.610
24	45.78	0.770
111	45.75	0.902
Std Dev	45.73	1.000
237	45.70	1.168
43	45.64	1.512
43	45.43	2.627

030.20	Insoluble Phosphate	
Lab	Spectrometric	
61	0.13	-1.734
61	0.11	-1.261
Std Dev	0.10	-1.000
23	0.07	0.000
24	0.07	0.000
Median	0.07	0.000
23	0.06	0.315
Std Dev	0.04	1.000
24	0.04	1.104
140	0.04	1.104

030.30	Insoluble Phosphate	
Lab	Alka. Quimociac	
31	0.03	0.000
Median	0.03	0.000

030.40	Insoluble Phosphate	
Lab	Automated	
34	0.08	0.000
Median	0.08	0.000

030.99	Insoluble Phosphate	
Lab	Other	
32	0.10	-1.340
Std Dev	0.10	-1.000
Median	0.09	0.000
Std Dev	0.08	1.000
32	0.08	1.340

030.XX	Insoluble Phosphate	
Lab	Total Method	
61	0.13	-1.734
61	0.11	-1.261
Std Dev	0.10	-1.000
32	0.10	-0.946
34	0.08	-0.315
32	0.08	-0.158
23	0.07	0.000
24	0.07	0.000
Median	0.07	0.000
23	0.06	0.315
Std Dev	0.04	1.000
24	0.04	1.104
140	0.04	1.104
31	0.03	1.261

040.20	Indirect Available Phosphate	
Lab	Spectrometric	
140	46.00	-1.517
31	45.99	-1.475
Std Dev	45.93	-1.000
61	45.91	-0.769
79	45.89	-0.602
23	45.87	-0.478
23	45.83	-0.104

Median	45.81	0.000
24	45.80	0.104
32	45.80	0.104
32	45.74	0.644
61	45.71	0.852
24	45.71	0.893
Std Dev	45.69	1.000
113	0.07	380.124

040.99	Indirect Available Phosphate	
Lab	Other	
34	46.02	0.000
Median	46.02	0.000

040.XX	Indirect Available Phosphate	
Lab	Total Method	
34	46.02	-1.498
140	46.00	-1.340
31	45.99	-1.301
Std Dev	45.95	-1.000
61	45.91	-0.631
79	45.89	-0.473
23	45.87	-0.355
23	45.83	0.000
Median	45.83	0.000
24	45.80	0.197
32	45.80	0.197
32	45.74	0.709
61	45.71	0.906
24	45.71	0.946
Std Dev	45.70	1.000
113	0.07	360.657

041.10	Direct Available Phosphate	
Lab	Gravimetric Quimociac	
219	46.10	-1.340
Std Dev	46.00	-1.000
Median	45.73	0.000
Std Dev	45.46	1.000
47	45.37	1.340

041.20	Direct Available Phosphate	
Lab	Spectrometric	
47	45.52	0.000

Median	45.52	0.000
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041.50	Direct Available Phosphate	
Lab	ICP	
63	47.45	-0.967
66	45.65	0.000
Median	45.65	0.000
Std Dev	43.78	1.000
80	42.45	1.713

041.60	Direct Available Phosphate	
Lab	EDTA Extract	
49	46.72	-0.107
77	46.70	0.000
Median	46.70	0.000
Std Dev	46.51	1.000
219	46.22	2.573

041.99	Direct Available Phosphate	
Lab	Other	
335	46.45	-1.340
Std Dev	46.40	-1.000
Median	46.26	0.000
Std Dev	46.11	1.000
79	46.07	1.340

041.XX	Direct Available Phosphate	
Lab	Total Method	
63	47.45	-1.829
Std Dev	46.84	-1.000
49	46.72	-0.837
77	46.70	-0.810
335	46.45	-0.479
219	46.22	-0.162
219	46.10	0.000
Median	46.10	0.000
79	46.07	0.041
66	45.65	0.608
47	45.52	0.783
47	45.37	0.980
Std Dev	45.35	1.000
80	42.45	4.921

048.10 Water Soluble Phosphate		
Lab		
113	41.04	0.000
Median	41.04	0.000

048.20 Water Soluble Phosphate		
Lab		
330	42.07	-2.155
14	41.79	-1.554
14	41.75	-1.458
Std Dev	41.53	-1.000
31	41.50	-0.933
23	41.46	-0.847
23	41.45	-0.825
61	41.07	0.000
Median	41.07	0.000
61	41.06	0.011
79	41.02	0.096
24	40.88	0.407
24	40.82	0.525
140	40.61	0.986
Std Dev	40.60	1.000
111	39.69	2.948

048.50 Water Soluble Phosphate		
Lab		
111	39.74	0.000
Median	39.74	0.000

048.99 Water Soluble Phosphate		
Lab		
32	41.34	-0.962
32	41.27	0.000
Median	41.27	0.000
Std Dev	41.19	1.000
34	41.14	1.718

048.XX Water Soluble Phosphate		
Lab		
330	42.07	-2.373
14	41.79	-1.686
14	41.75	-1.576
Std Dev	41.51	-1.000
31	41.50	-0.975

23	41.46	-0.877
23	41.45	-0.852
32	41.34	-0.570
32	41.27	-0.399
34	41.14	-0.092
Median	41.10	0.000
61	41.07	0.092
61	41.06	0.104
113	41.04	0.166
79	41.02	0.202
24	40.88	0.558
24	40.82	0.693
Std Dev	40.69	1.000
140	40.61	1.220
111	39.74	3.342
111	39.69	3.465

050.50 %K ₂ O Soluble Potash		
Lab		
99	0.11	-2.233
Std Dev	0.10	-1.000
23	0.09	0.000
Median	0.09	0.000
23	0.08	0.447

050.99 %K ₂ O Soluble Potash		
Lab		
111	0.12	-3.077
330	0.11	-1.539
Std Dev	0.11	-1.000
24	0.11	-0.769
61	0.10	0.000
61	0.10	0.000
80	0.10	0.000
Median	0.10	0.000
43	0.10	0.744
24	0.10	0.769
43	0.09	0.818
Std Dev	0.09	1.000
31	0.09	1.539

050.XX %K ₂ O Soluble Potash		
Lab		
111	0.12	-2.598

99	0.11	-1.299
330	0.11	-1.299
Std Dev	0.11	-1.000
24	0.11	-0.649
61	0.10	0.000
61	0.10	0.000
80	0.10	0.000
Median	0.10	0.000
43	0.10	0.628
24	0.10	0.649
43	0.09	0.691
Std Dev	0.09	1.000
31	0.09	1.299
23	0.09	1.948
23	0.08	2.598

060.00 Free Water		
Lab		
31	3.01	-2.010
24	2.92	-1.610
24	2.92	-1.587
Std Dev	2.79	-1.000
43	2.75	-0.811
43	2.74	-0.764
140	2.74	-0.764
23	2.65	-0.317
23	2.59	-0.059
Median	2.58	0.000
111	2.57	0.059
34	2.56	0.106
32	2.51	0.341
32	2.48	0.482
61	2.41	0.811
Std Dev	2.36	1.000
61	2.34	1.117
79	2.34	1.140
113	2.31	1.258

060.99 Free Water		
Lab		
47	4.56	-7.074
Std Dev	2.89	-1.000
330	2.87	-0.930
14	2.72	-0.383

Median	2.62	0.000
275	2.51	0.383
275	2.45	0.602
Std Dev	2.34	1.000
14	2.25	1.331

060.XX Free Water		
Lab		
47	4.56	-9.098
31	3.01	-1.967
24	2.92	-1.576
24	2.92	-1.553
330	2.87	-1.346
Std Dev	2.79	-1.000
43	2.75	-0.794
43	2.74	-0.748
140	2.74	-0.748
14	2.72	-0.656
23	2.65	-0.311
23	2.59	-0.058
Median	2.58	0.000
111	2.57	0.058
34	2.56	0.104
275	2.51	0.311
32	2.51	0.334
32	2.48	0.472
275	2.45	0.587
61	2.41	0.794
Std Dev	2.36	1.000
61	2.34	1.093
79	2.34	1.116
113	2.31	1.231
14	2.25	1.507

101.00 Acid Soluble Calcium		
Lab	%CaO	Atomic Absorption
219	0.15	0.000
Median	0.15	0.000

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
61	0.28	-2.193
24	0.27	-1.949
24	0.26	-1.218

61	0.26	-1.218
Std Dev	0.25	-1.000
23	0.25	-0.731
23	0.24	-0.487
14	0.23	0.000
32	0.23	0.000
34	0.23	0.000
Median	0.23	0.000
31	0.23	0.073
32	0.23	0.244
14	0.22	0.487
111	0.22	0.487
43	0.22	0.571
330	0.21	0.975
Std Dev	0.21	1.000
43	0.11	5.953

101.XX Acid Soluble Calcium		
Lab	%CaO	Total Method

61	0.28	-2.412
24	0.27	-2.144
24	0.26	-1.340
61	0.26	-1.340
Std Dev	0.25	-1.000
23	0.25	-0.804
23	0.24	-0.536
14	0.23	0.000
32	0.23	0.000
34	0.23	0.000
Median	0.23	0.000
31	0.23	0.080
32	0.23	0.268
14	0.22	0.536
111	0.22	0.536
43	0.22	0.628
Std Dev	0.21	1.000
330	0.21	1.072
219	0.15	4.449
43	0.11	6.548

121.00 Acid Soluble Magnesium		
Lab	%MgO	Atomic Absorption

219	1.57	0.000
Median	1.57	0.000

121.30 Acid Soluble Magnesium		
Lab	%MgO	ICP

61	1.59	-0.867
23	1.55	-0.315
23	1.55	-0.236
24	1.55	-0.236
34	1.55	-0.236
24	1.54	-0.158
32	1.53	0.000
32	1.53	0.000
61	1.53	0.000
Median	1.53	0.000
31	1.48	0.867
Std Dev	1.47	1.000
14	1.46	1.182
14	1.46	1.182
43	1.36	2.759
43	1.35	2.916

121.99 Acid Soluble Magnesium		
Lab	%MgO	Other

111	1.49	-1.340
Std Dev	1.48	-1.000
Median	1.45	0.000
Std Dev	1.42	1.000
330	1.41	1.340

121.XX Acid Soluble Magnesium		
Lab	%MgO	Total Method

61	1.59	-0.819
219	1.57	-0.558
23	1.55	-0.298
23	1.55	-0.223
24	1.55	-0.223
34	1.55	-0.223
24	1.54	-0.149
32	1.53	0.000
32	1.53	0.000
61	1.53	0.000
Median	1.53	0.000
111	1.49	0.670
31	1.48	0.819
Std Dev	1.46	1.000

14	1.46	1.117
14	1.46	1.117
330	1.41	1.787
43	1.36	2.606
43	1.35	2.754

144.01 Sulfate Sulfur (S)		
Lab	Gravimetric	

79	1.31	0.000
Median	1.31	0.000

144.99 Sulfate Sulfur (S)		
Lab	Other	

330	3.48	-98.490
Std Dev	1.30	-1.000
32	1.29	-0.447
23	1.28	-0.223
32	1.28	-0.223
34	1.28	-0.223
61	1.28	-0.223
23	1.28	0.000
24	1.28	0.000
Median	1.28	0.000
24	1.26	0.670
Std Dev	1.25	1.000
14	1.25	1.117
14	1.24	1.563
61	1.24	1.787
31	1.22	2.680

144.XX Sulfate Sulfur (S)		
Lab	Total Method	

330	3.48	-107.322
79	1.31	-1.340
Std Dev	1.30	-1.000
32	1.29	-0.365
23	1.28	-0.122
32	1.28	-0.122
34	1.28	-0.122
61	1.28	-0.122
Median	1.28	0.000
23	1.28	0.122
24	1.28	0.122
24	1.26	0.853

Std Dev	1.26	1.000
14	1.25	1.340
14	1.24	1.827
61	1.24	2.071
31	1.22	3.045

145.99 Total Sulfur (S)		
Lab	Other	

31	12.90	-5.279
Std Dev	3.48	-1.000
111	1.30	-0.010
Median	1.28	0.000
43	1.26	0.010
43	1.24	0.019

145.XX Total Sulfur (S)		
Lab	Total Method	

31	12.90	-5.279
Std Dev	3.48	-1.000
111	1.30	-0.010
Median	1.28	0.000
43	1.26	0.010
43	1.24	0.019

151.00 Total Arsenic		
Lab	Atomic Absorption	

113	13.40	0.000
Median	13.40	0.000

151.30 Total Arsenic		
Lab	ICP	

24	38.65	-14.079
Std Dev	19.86	-1.000
43	19.85	-0.992
43	19.05	-0.435
Median	18.43	0.000
61	17.80	0.435
61	17.70	0.505
140	17.36	0.745

151.99 Total Arsenic		
Lab	Other	

335	19.32	-1.465
Std Dev	19.01	-1.000

18	18.35	0.000
Median	18.35	0.000
Std Dev	17.69	1.000
18	17.55	1.215

151.XX	Total Arsenic	
Lab	Total Method	
24	38.65	-16.596
43	19.85	-1.432
335	19.32	-1.000
Std Dev	19.31	-1.000
43	19.05	-0.786
18	18.35	-0.222
Median	18.08	0.000
61	17.80	0.222
61	17.70	0.302
18	17.55	0.423
140	17.36	0.581
Std Dev	16.84	1.000
113	13.40	3.771

165.99	Acid Soluble Boron	
Lab	PPM	Other
275	127.40	-0.676
275	126.80	-0.666
Median	86.45	0.000
24	46.10	0.666
330	44.72	0.689

65.XX, ppm	Acid Soluble Boron	
Lab	PPM	Total Method
275	127.40	-0.676
275	126.80	-0.666
Median	86.45	0.000
24	46.10	0.666
330	44.72	0.689

171.99	Water Soluble Boron	
Lab	PPM	Other
330	34.47	0.000
Median	34.47	0.000

171.XX	Water Soluble Boron	
Lab	PPM	Total Method

330	34.47	0.000
Median	34.47	0.000

181.00	Total Cadmium	
Lab	Atomic Absorbtion	
330	4.20	0.000
Median	4.20	0.000

181.30	Total Cadmium	
Lab	PPM	ICP
43	4.48	-2.169
43	4.48	-2.169
Std Dev	4.07	-1.000
113	4.04	-0.916
113	3.86	-0.385
18	3.75	-0.086
Median	3.72	0.000
335	3.69	0.086
275	3.60	0.342
275	3.50	0.628
Std Dev	3.37	1.000
61	2.80	2.626
61	2.60	3.197

181.99	Total Cadmium	
Lab	Other	
18	3.65	-0.642
24	3.26	0.000
Median	3.26	0.000
Std Dev	2.64	1.000
31	2.00	2.038

181.XX	Total Cadmium	
Lab	PPM	Total Method
43	4.48	-1.600
43	4.48	-1.600
330	4.20	-1.047
Std Dev	4.18	-1.000
113	4.04	-0.733
113	3.86	-0.365
18	3.75	-0.158
335	3.69	-0.040
Median	3.67	0.000
18	3.65	0.040

275	3.60	0.138
275	3.50	0.336
24	3.26	0.820
Std Dev	3.16	1.000
61	2.80	1.719
61	2.60	2.114
31	2.00	3.299

190.00	Aluminum	
Lab	%Al ₂ O ₃	ICP
275	1.40	-6.281
14	1.29	-2.429
14	1.28	-2.261
275	1.25	-1.256
Std Dev	1.24	-1.000
34	1.24	-0.754
24	1.22	-0.251
24	1.22	-0.084
61	1.22	-0.084
Median	1.21	0.000
23	1.21	0.084
23	1.21	0.084
32	1.21	0.084
32	1.21	0.251
Std Dev	1.18	1.000
61	1.18	1.089
43	1.17	1.591
43	1.16	1.926
111	0.83	12.814

190.99	Aluminum	
Lab	%Al ₂ O ₃	Atomic Absorption
31	1.23	-1.340
Std Dev	1.22	-1.000
Median	1.19	0.000
Std Dev	1.16	1.000
330	1.15	1.340

190.XX	Aluminum	
Lab	%Al ₂ O ₃	Total Method
275	1.40	-5.289
14	1.29	-2.045
14	1.28	-1.904
275	1.25	-1.058

Std Dev	1.25	-1.000
34	1.24	-0.635
31	1.23	-0.494
24	1.22	-0.212
24	1.22	-0.071
61	1.22	-0.071
Median	1.21	0.000
23	1.21	0.071
23	1.21	0.071
32	1.21	0.071
32	1.21	0.212
61	1.18	0.917
Std Dev	1.18	1.000
43	1.17	1.340
43	1.16	1.622
330	1.15	1.763
111	0.83	10.791

191.00	Total Chromium	
Lab	Atomic Absorbtion	
330	81.00	0.000
Median	81.00	0.000

191.30	Total Chromium	
Lab	ICP	
335	112.86	-6.434
18	103.50	-2.852
18	102.50	-2.469
Std Dev	98.66	-1.000
61	97.50	-0.555
43	96.50	-0.172
275	96.10	-0.019
Median	96.05	0.000
43	96.00	0.019
61	96.00	0.019
111	95.50	0.211
275	94.50	0.593
Std Dev	93.44	1.000
113	90.25	2.221
113	84.53	4.411

191.99	Total Chromium	
Lab	PPM	Other
24	120.00	-1.340

Std Dev	117.25	-1.000
Median	109.18	0.000
Std Dev	101.10	1.000
31	98.35	1.340

191.XX	Total Chromium	
Lab	PPM	Total Method
24	120.00	-5.903
335	112.86	-4.139
18	103.50	-1.828
18	102.50	-1.581
Std Dev	100.15	-1.000
31	98.35	-0.556
61	97.50	-0.346
43	96.50	-0.099
275	96.10	0.000
Median	96.10	0.000
43	96.00	0.025
61	96.00	0.025
111	95.50	0.148
275	94.50	0.395
Std Dev	92.05	1.000
113	90.25	1.445
113	84.53	2.858
330	81.00	3.730

202.30	Acid Soluble Cobalt	
Lab	PPM	ICP
43		

202.99	Acid Soluble Cobalt	
Lab	PPM	Other
24	4.31	0.000
Median	4.31	0.000

202.XX	Acid Soluble Cobalt	
Lab	PPM	Total Method
43	5.00	-1.535
43	5.00	-1.535
Std Dev	4.71	-1.000
61	4.50	-0.627
24	4.31	-0.282
Median	4.16	0.000
61	4.00	0.282
330	3.90	0.463

18	3.85	0.554
18	3.85	0.554

221.00	Acid Soluble Copper	
Lab	PPM	Atomic Absorption
219	1.77	0.000
Median	1.77	0.000

221.30	Acid Soluble Copper	
Lab	PPM	ICP
111	6.00	-5.016
Std Dev	3.08	-1.000
61	3.00	-0.893
61	2.70	-0.481
18	2.35	0.000
Median	2.35	0.000
43	2.00	0.481
18	1.75	0.825
Std Dev	1.62	1.000
43	1.50	1.168

221.99	Acid Soluble Copper	
Lab	PPM	Other
24	0.57	0.000
Median	0.57	0.000

221.XX	Acid Soluble Copper	
Lab	PPM	Total Method
111	6.00	-4.713
61	3.00	-1.017
Std Dev	2.99	-1.000
61	2.70	-0.647
18	2.35	-0.216
Median	2.18	0.000
43	2.00	0.216
18	1.75	0.524
43	1.50	0.832
Std Dev	1.36	1.000
24	0.57	1.978

241.30	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	ICP
111	1.90	-0.788
23	1.89	-0.473

23	1.89	-0.473
275	1.89	-0.473
24	1.89	-0.315
32	1.89	-0.315
24	1.88	0.000
34	1.88	0.000
43	1.88	0.000
Median	1.88	0.000
32	1.87	0.315
275	1.85	0.788
43	1.85	0.946
Std Dev	1.84	1.000
14	1.84	1.104
14	1.83	1.419
61	1.83	1.419
61	1.75	3.941

241.99	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	Other
31	1.79	-1.340
Std Dev	1.78	-1.000
Median	1.74	0.000
Std Dev	1.69	1.000
330	1.68	1.340

241.XX	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	Total Method
111	1.90	-0.853
23	1.89	-0.609
23	1.89	-0.609
275	1.89	-0.609
24	1.89	-0.487
32	1.89	-0.487
24	1.88	-0.244
34	1.88	-0.244
43	1.88	-0.244
32	1.87	0.000
Median	1.87	0.000
275	1.85	0.365
43	1.85	0.487
14	1.84	0.609
14	1.83	0.853
61	1.83	0.853
Std Dev	1.82	1.000

31	1.79	1.827
219	1.77	2.436
61	1.75	2.802
330	1.68	4.507

251.30	Total Lead	
Lab	PPM	ICP
113	2.84	-1.921
18	2.35	-1.062
Std Dev	2.31	-1.000
18	2.15	-0.708
113	1.95	-0.360
43	1.95	-0.354
43	1.75	0.000
Median	1.75	0.000
61	1.35	0.708
61	1.30	0.797
335	1.29	0.815
275	1.22	0.938
Std Dev	1.19	1.000
275	1.06	1.222

251.99	Total Lead	
Lab	PPM	Other
31	1.90	0.000
Median	1.90	0.000

251.XX	Total Lead	
Lab	PPM	Total Method
113	2.84	-1.919
Std Dev	2.35	-1.000
18	2.35	-0.998
18	2.15	-0.618
113	1.95	-0.244
43	1.95	-0.238
31	1.90	-0.143
Median	1.83	0.000
43	1.75	0.143
61	1.35	0.903
61	1.30	0.998
Std Dev	1.30	1.000
335	1.29	1.017
275	1.22	1.150
275	1.06	1.454

261.30 Acid Soluble Manganese		
Lab	ICP	
111	304.50	-1.340
Std Dev	298.60	-1.000
Median	281.25	0.000
Std Dev	263.90	1.000
330	258.00	1.340

261.99 Acid Soluble Manganese		
Lab	PPM	Other
43	319.00	-1.424
43	316.00	-1.173
Std Dev	313.94	-1.000
61	313.00	-0.921
31	310.55	-0.716
61	302.00	0.000
Median	302.00	0.000
18	298.00	0.335
18	297.00	0.419
219	291.55	0.875
Std Dev	290.06	1.000
24	0.90	25.217

261.XX Acid Soluble Manganese		
Lab	PPM	Total Method
43	319.00	-1.302
43	316.00	-1.072
Std Dev	315.06	-1.000
61	313.00	-0.842
31	310.55	-0.655
111	304.50	-0.191
61	302.00	0.000
Median	302.00	0.000
18	298.00	0.306
18	297.00	0.383
219	291.55	0.800
Std Dev	288.94	1.000
330	258.00	3.369
24	0.90	23.056

271.99 Water Soluble Manganese		
Lab	Other	
330	28.00	0.000

Median	28.00	0.000
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271.XX Water Soluble Manganese		
Lab	PPM	Total Method
330	28.00	0.000
Median	28.00	0.000

281.30 Total Mercury		
Lab	PPM	ICP
24	283.00	-1.340
Std Dev	247.10	-1.000
Median	141.51	0.000
Std Dev	35.91	1.000
335	0.01	1.340

281.99 Total Mercury		
Lab	PPM	Other
275	0.00	0.000
275	0.00	0.000
Median	0.00	0.000

281.XX Total Mercury		
Lab	PPM	Total Method
24	283.00	-5.360
Std Dev	52.81	-1.000
335	0.01	0.000
Median	0.01	0.000
275	0.00	0.000
275	0.00	0.000

289.30 Total Molybdenum		
Lab	PPM	ICP
18		

289.99 Total Molybdenum		
Lab	PPM	Other
24	<0.001	0.000
31	7.35	0.000
Median	7.35	0.000

289.XX Total Molybdenum		
Lab	PPM	Total Method
24	<0.001	0.000
18	10.50	-1.286
18	10.45	-1.233

Std Dev	10.23	-1.000
43	9.85	-0.590
43	9.85	-0.590
61	9.30	0.000
Median	9.30	0.000
330	9.00	0.322
61	8.60	0.750
Std Dev	8.37	1.000
31	7.35	2.090
111	2.00	7.826

291.30 Total Nickel		
Lab	ICP	
330		

291.99 Total Nickel		
Lab	PPM	Other
31	18.75	-1.340
Std Dev	17.72	-1.000
Median	14.70	0.000
Std Dev	11.68	1.000
24	10.65	1.340

291.XX Total Nickel		
Lab	PPM	Total Method
330	19.00	-2.560
31	18.75	-2.147
Std Dev	18.06	-1.000
335	17.77	-0.520
275	17.66	-0.347
61	17.65	-0.330
43	17.50	-0.083
Median	17.45	0.000
61	17.40	0.083
275	17.10	0.578
43	17.00	0.743
Std Dev	16.84	1.000
18	16.50	1.569
18	16.25	1.982
24	10.65	11.232

301.30 Total Selenium		
Lab	PPM	ICP
24	16.70	-48.078
Std Dev	0.71	-1.000

330	0.60	-0.663
18	0.40	-0.074
Median	0.38	0.000
18	0.35	0.074
Std Dev	0.04	1.000
140	0.01	1.075
335	0.01	1.075

301.XX Total Selenium		
Lab	PPM	Total Mthod
24	16.70	-48.078
Std Dev	0.71	-1.000
330	0.60	-0.663
18	0.40	-0.074
Median	0.38	0.000
18	0.35	0.074
Std Dev	0.04	1.000
140	0.01	1.075
335	0.01	1.075

311.00 Sodium		
Lab	%Na ₂ O	Atomic Absorbtion
330	0.30	0.000
Median	0.30	0.000

311.99 Sodium		
Lab	%Na ₂ O	Other
111	0.25	-2.193
24	0.24	-1.218
Std Dev	0.24	-1.000
23	0.24	-0.731
23	0.23	-0.244
31	0.23	-0.244
Median	0.23	0.000
24	0.23	0.244
61	0.22	0.731
61	0.22	0.731
Std Dev	0.22	1.000
43	0.19	3.188
43	0.19	3.188

311.XX Sodium		
Lab	%Na ₂ O	Total Method
330	0.30	-5.360

111	0.25	-1.531
Std Dev	0.24	-1.000
24	0.24	-0.766
23	0.24	-0.383
23	0.23	0.000
31	0.23	0.000
Median	0.23	0.000
24	0.23	0.383
61	0.22	0.766
61	0.22	0.766
Std Dev	0.22	1.000
43	0.19	2.696
43	0.19	2.696

321.00	Acid Soluble Zinc	
Lab	Atomic Absorption	
219	52.26	0.000
Median	52.26	0.000

321.30	Acid Soluble Zinc	
Lab	PPM	ICP
111	114.50	-16.171
Std Dev	48.13	-1.000
61	48.00	-0.971
61	44.00	-0.057
Median	43.75	0.000
18	43.50	0.057
18	40.35	0.777
Std Dev	39.38	1.000
24	38.80	1.131

321.99	Acid Soluble Zinc	
Lab	Other	
330	65.00	-0.731
31	64.00	-0.661
Median	54.50	0.000
43	45.00	0.661
43	45.00	0.661

321.XX	Acid Soluble Zinc	
Lab	PPM	Total Method
111	114.50	-6.477
330	65.00	-1.864
31	64.00	-1.771

Std Dev	55.73	-1.000
219	52.26	-0.676
61	48.00	-0.280
43	45.00	0.000
43	45.00	0.000
Median	45.00	0.000
61	44.00	0.093
18	43.50	0.140
18	40.35	0.433
24	38.80	0.578

325.10	Fluoride	
Lab	%	Electrode
79	2.96	-12.876
24	1.96	-1.223
32	1.86	-0.117
34	1.86	-0.117
32	1.86	-0.058
24	1.85	0.000
Median	1.85	0.000
23	1.85	0.058
23	1.83	0.233
14	1.66	2.214
14	1.66	2.272
111	0.28	18.352

325.99	Fluoride	
Lab	%	Other
61	1.97	-0.630
61	1.96	-0.565
Median	1.87	0.000
31	1.78	0.565
330	1.66	1.340

325.XX	Fluoride	
Lab	%	Total Method
79	2.96	-7.897
61	1.97	-0.822
24	1.96	-0.750
61	1.96	-0.750
32	1.86	-0.071
34	1.86	-0.071
32	1.86	-0.036
24	1.85	0.000

Median	1.85	0.000
23	1.85	0.036
23	1.83	0.143
31	1.78	0.500
14	1.66	1.358
330	1.66	1.358
14	1.66	1.394
111	0.28	11.256