

AFPC

2017-04

Grade

10-40-0-10S-1Zn

Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
AMMONIACAL NITROGEN					
Ammoniacal Nitrogen, Other		001.99	14	11.88	0.05
Method Group 001.XX PCT			14	11.88	0.06
TOTAL NITROGEN					
Total Nitrogen, Modified Comprehensive	978.02	010.11	2	12.02	0.09
Total Nitrogen, Salicylic	955.04d	010.12	1	11.64	0.00
Total Nitrogen, Combustion	993.13	010.60	17	11.88	0.08
Total Nitrogen, Other		010.99	4	11.86	0.14
Method Group 010.XX PCT			24	11.87	0.10
TOTAL PHOSPHATE					
Total Phosphate, Gravimetric Quimociac		020.10	1	41.57	0.00
Total Phosphate, Spectrometric	978.02	020.20	20	41.25	0.21
Total Phosphate, ICP	970.03	020.40	4	41.09	0.18
Total Phosphate, ICP, Lithium	970.02	020.50	1	41.04	0.00
Total Phosphate, Other	993.13	020.99	1	40.64	0.00
Method Group 020.XX PCT			27	41.19	0.25
INSOLUBLE PHOSPHATE					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	8	0.39	0.12
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.21	0.00
Insoluble Phosphate, Automated	978.01	030.40	3	0.37	0.01
Insoluble Phosphate, Other		030.99	2	0.43	0.08
Method Group 030.XX PCT			14	0.37	0.12
INDIRECT AVAILABLE PHOSPHATE					
Indirect Available Phosphate, Spectrometric	960.02	040.20	10	40.88	0.12
Indirect Available Phosphate, Automated	960.02	040.40	1	40.72	0.00
Indirect Available Phosphate, Other		040.99	1	40.98	0.00
Method Group 040.XX PCT			12	40.88	0.19
DIRECT AVAILABLE PHOSPHATE					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	3	40.78	0.13
Direct Available Phosphate, Spectrometric	960.03D	041.20	3	40.52	0.04
Direct Available Phosphate, Automated	978.01	041.40	1	39.64	0.00
Direct Available Phosphate, ICP		041.50	2	39.50	0.26
Direct Available Phosphate, EDTA Extract	993.01	041.60	4	40.66	0.33
Method Group 041.XX PCT			13	40.55	0.77
WATER SOLUBLE PHOSPHATE					
Water Soluble Phosphate, Spectrometric	970.01	048.20	15	36.34	0.16
Water Soluble Phosphate, Other		048.99	5	36.69	0.31
Method Group 048.XX PCT			20	36.36	0.23
SOLUBLE POTASH AS K₂O					
Soluble Potash, ICP(Oxalate)		050.50	3	0.12	0.00
Soluble Potash, ICP(Citrate)		050.51	1	0.14	0.00
Soluble Potash, Other		050.99	8	0.13	0.01
Method Group 050.XX PCT			12	0.13	0.01
FREE WATER					
Free Water, Vacuum Oven	965.08B	060.00	15	0.70	0.08
Free Water, Other		060.99	5	0.64	0.29
Method Group 060.XX PCT			20	0.69	0.15
ACID SOLUBLE CALCIUM AS CaO					
Acid Soluble Calcium, Atomic Absorption	945.04	101.00	1	0.23	0.00
Acid Soluble Calcium, ICP		101.30	15	0.42	0.02
Acid Soluble Calcium, Other		101.99	1	0.25	0.00
Method Group 101.XX PCT			17	0.42	0.03
ACID SOLUBLE MAGNESIUM AS MgO					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	0.58	0.00
Acid Soluble Magnesium, ICP		121.30	14	0.82	0.02
Acid Soluble Magnesium, Other		121.99	3	0.76	0.10
Method Group 121.XX PCT			18	0.80	0.04

WATER SOLUBLE MAGNESIUM

Water Soluble Magnesium, Other	131.99	1	0.06	0.00
Method Group 131.XX PCT		1	0.06	0.00

SULFATE SULFUR (S)

Sulfur, Gravimetric	980.02(a)	144.01	3	9.80	1.77
Sulfur, Other		144.99	15	5.04	1.38
Method Group 144.XX PCT			18	5.09	2.66

TOTAL SULFUR (S)

Sulfur, Other		145.99	16	10.29	0.2
Method Group 145.XX PCT			16	10.29	0.2

TOTAL ARSENIC

Total Arsenic, ICP	980.02(b)	151.02	5	11.5	0.6
Total Arsenic, Other		151.99	3	10.8	0.5
Method Group 151.XX PPM			8	11.1	0.8

ACID SOLUBLE BORON

Acid Soluble Boron, Other		165.99	2	73	29.4
Method Group 165.XX PPM			2	73	35.8

TOTAL CADMIUM

Total Cadmium, Atomic Absorbtion		181.00	1	4	0.0
Total Cadmium, ICP		181.30	8	3.0	0.6
Total Cadmium, Other		181.99	2	3.1	0.0
Method Group 181.XX PPM			11	3.2	0.5

ALUMINUM AS Al₂O₃

ICP, %			14	1.56	0.03
Water Soluble Chlorine, Other, %		190.99	2	1.53	0.04
Method Group 190.XX PCT			16	1.56	0.04

TOTAL CHROMIUM

Total Chromium, Atomic Absorbtion		191.00	1	80	0.0
Total Chromium, ICP		191.30	7	71	2.4
Total Chromium, Other		191.99	1	69	0.0
Method Group 191.XX PPM			9	71	3.7

ACID SOLUBLE COBALT

Acid Soluble Cobalt, ICP		202.30	7	2	0.9
Acid Soluble Cobalt, Other		202.99	1	2	0.0
Method Group 202.XX PPM			8	2	1.0

ACID SOLUBLE COPPER

Acid Soluble Copper, Other		221.99	1	0.9	0.0
Method Group 221.XX PPM			5	3.1	2.4

ACID SOLUBLE IRON AS Fe₂O₃

Acid Soluble Iron, ICP		241.30	15	1.11	0.03
Acid Soluble Iron, Other		241.99	2	1.16	0.03
Method Group 241.XX PCT			18	1.12	0.06

TOTAL LEAD

Total Lead, Atomic Absorbtion		251.00	1	1	0.0
Total Lead, ICP		251.30	8	2	1.6
Total Lead, Other		251.99	1	2.1	0.0
Method Group 251.XX PPM			10	2	1.5

ACID SOLUBLE MANGANESE

Acid Soluble Manganese, ICP	972.02a	261.30	3	329	10.6
Acid Soluble Manganese, Other		261.99	7	327	8.5
Method Group 261.XX PPM			10	328	11.8

TOTAL MOLYBDENUM

Total Molybdenum, ICP		289.30	7	11	1.2
Total Molybdenum, Other		289.99	1	13	0.0
Method Group 289.XX PPM			8	11	1.6

TOTAL NICKEL

Total Nickel, ICP		291.30	6	13.3	0.3
Total Nickel, icp		291.99	1	12.7	0.0
Method Group 291.XX PPM			7	13.2	0.5

TOTAL SELENIUM

Total Selenium, ICP		301.30	5	0.7	0.8
Total Selenium, Other		301.99	1	1	0.0

Method Group 301.XX PPM		6	1.0	0.8
SODIUM AS Na₂O				
Sodium, Atomic Absorbtion	983.04 311.00	1	0.28	0.00
Sodium, Other	311.99	8	0.21	0.01
Method Group 311.XX PCT		9	0.22	0.01
ACID SOLUBLE ZINC				
Acid Soluble Zinc, Atomic Absorption	975.02 321.00	5	1.0	0.0
Acid Soluble Zinc, ICP	321.30	14	1.0	0.0
Acid Soluble Zinc, Other	321.99	4	1.0	0.1
Method Group 321.XX %		23	1.0	0.0
FLUORIDE				
Volumentric	325.10	13	1.69	0.17
Distilled/Electrode	325.99	3	1.88	0.04
Method Group 325.XX PCT		16	1.71	0.19

001.99 Ammoniacal Nitrogen		
Lab		Other
113	12.14	-5.413
330	11.97	-1.944
Std Dev	11.93	-1.000
140	11.93	-0.998
23	11.92	-0.893
24	11.92	-0.893
24	11.91	-0.683
23	11.88	-0.053
Median	11.88	0.000
61	11.88	0.053
61	11.87	0.158
32	11.86	0.368
32	11.86	0.473
34	11.85	0.578
Std Dev	11.83	1.000
310	11.67	4.362
38	11.14	15.607

001.XX Ammoniacal Nitrogen		
Lab		Total Method
113	12.14	-5.413
330	11.97	-1.944
Std Dev	11.93	-1.000
140	11.93	-0.998
23	11.92	-0.893
24	11.92	-0.893
24	11.91	-0.683
23	11.88	-0.053
Median	11.88	0.000
61	11.88	0.053
61	11.87	0.158
32	11.86	0.368
32	11.86	0.473
34	11.85	0.578
Std Dev	11.83	1.000
310	11.67	4.362
38	11.14	15.607

010.11 Total Nitrogen		
Lab		Modified Comprehensive
113	12.14	-1.340
Std Dev	12.11	-1.000

Median	12.02	0.000
Std Dev	11.92	1.000
219	11.89	1.340

010.12 Total Nitrogen		
Lab		Salicylic
107	11.64	0.000
Median	11.64	0.000

010.60 Total Nitrogen		
Lab		Combustion
49	12.09	-2.558
66	12.02	-1.645
47	11.99	-1.340
Std Dev	11.96	-1.000
80	11.96	-0.975
219	11.96	-0.975
137	11.96	-0.914
29	11.92	-0.487
9	11.91	-0.335
110	11.88	0.000
Median	11.88	0.000
14	11.86	0.244
31	11.86	0.305
103	11.86	0.305
14	11.85	0.365
77	11.84	0.487
9	11.82	0.731
111	11.80	0.975
Std Dev	11.80	1.000
99	11.68	2.436

010.99 Total Nitrogen		
Lab		Other
330	12.36	-3.544
Std Dev	12.00	-1.000
32	11.86	-0.018
Median	11.86	0.000
32	11.86	0.018
Std Dev	11.72	1.000
405	11.62	1.710

010.99 Total Nitrogen		
Lab		Other
330	12.36	-3.544
Std Dev	12.00	-1.000
32	11.86	-0.018
Median	11.86	0.000
32	11.86	0.018
Std Dev	11.72	1.000
405	11.62	1.710

010.XX Total Nitrogen		
Lab		Total Method

330	12.36	-5.777
113	12.14	-3.216
49	12.09	-2.620
66	12.02	-1.727
47	11.99	-1.429
80	11.96	-1.072
219	11.96	-1.072
137	11.96	-1.012
Std Dev	11.95	-1.000
29	11.92	-0.596
9	11.91	-0.447
219	11.89	-0.238
110	11.88	-0.119
Median	11.87	0.000
14	11.86	0.119
32	11.86	0.119
31	11.86	0.179
32	11.86	0.179
103	11.86	0.179
14	11.85	0.238
77	11.84	0.357
9	11.82	0.596
111	11.80	0.834
Std Dev	11.79	1.000
99	11.68	2.263
107	11.64	2.740
405	11.62	3.008

020.10 Total Phosphate		
Lab		Gravimetric Quimociac
219	41.57	0.000
Median	41.57	0.000

020.20 Total Phosphate		
Lab		Spectrometric
32	41.75	-2.450
32	41.53	-1.358
99	41.51	-1.261
310	41.50	-1.237
61	41.48	-1.116
Std Dev	41.45	-1.000
31	41.37	-0.606
24	41.34	-0.437
34	41.33	-0.388

113	41.29	-0.218
275	41.26	-0.073
Median	41.25	0.000
24	41.23	0.073
61	41.22	0.146
111	41.19	0.267
23	41.17	0.364
23	41.13	0.558
140	41.09	0.752
14	41.08	0.825
Std Dev	41.04	1.000
14	40.99	1.261
110	40.95	1.431
275	40.85	1.899

020.40 Total Phosphate		
Lab		Automated
9	41.11	-0.109
9	41.09	0.000
219	41.09	0.000
Median	41.09	0.000
Std Dev	40.91	1.000
137	40.13	5.251

020.50 Total Phosphate		
Lab		ICP
111	41.04	0.000
Median	41.04	0.000

020.99 Total Phosphate		
Lab		Other
330	40.64	0.000
Median	40.64	0.000

020.XX Total Phosphate		
Lab		Total Method
32	41.75	-2.779
219	41.57	-1.886
32	41.53	-1.663
99	41.51	-1.563
310	41.50	-1.539
61	41.48	-1.414
Std Dev	41.39	-1.000
31	41.37	-0.893

24	41.34	-0.720
34	41.33	-0.670
113	41.29	-0.496
275	41.26	-0.347
24	41.23	-0.199
61	41.22	-0.124
111	41.19	0.000
Median	41.19	0.000
23	41.17	0.099
23	41.13	0.298
9	41.11	0.397
9	41.09	0.496
140	41.09	0.496
219	41.09	0.496
14	41.08	0.571
111	41.04	0.744
Std Dev	40.99	1.000
14	40.99	1.017
110	40.95	1.191
275	40.85	1.670
330	40.64	2.754
137	40.13	5.286

030.20 Insoluble Phosphate		
Lab	Spectrometric	
24	0.51	-1.037
Std Dev	0.51	-1.000
61	0.51	-0.994
24	0.49	-0.865
61	0.40	-0.043
Median	0.39	0.000
23	0.39	0.043
113	0.34	0.432
140	0.34	0.475
23	0.31	0.692

030.30 Insoluble Phosphate		
Lab	Alka. Quimociac	
31	0.21	0.000
Median	0.21	0.000

030.40 Insoluble Phosphate		
Lab	Automated	
9	0.38	-0.447

9	0.37	0.000
Median	0.37	0.000
Std Dev	0.36	1.000
34	0.35	2.233

030.99 Insoluble Phosphate		
Lab	Other	
32	0.54	-1.340
Std Dev	0.51	-1.000
Median	0.43	0.000
Std Dev	0.35	1.000
32	0.33	1.340

030.XX Insoluble Phosphate		
Lab	Total Method	
32	0.54	-1.727
24	0.51	-1.417
61	0.51	-1.366
24	0.49	-1.211
Std Dev	0.47	-1.000
61	0.40	-0.232
23	0.39	-0.129
9	0.38	-0.026
Median	0.37	0.000
9	0.37	0.026
34	0.35	0.283
113	0.34	0.335
140	0.34	0.387
32	0.33	0.490
23	0.31	0.644
Std Dev	0.28	1.000
31	0.21	1.675

040.20 Indirect Available Phosphate		
Lab	Spectrometric	
31	41.17	-2.319
61	41.08	-1.618
Std Dev	41.01	-1.000
113	40.95	-0.546
24	40.91	-0.216
9	40.91	-0.196
Median	40.88	0.000
23	40.86	0.196
24	40.85	0.320

Std Dev	40.76	1.000
140	40.76	1.062
23	40.75	1.144
61	40.71	1.433

040.40 Indirect Available Phosphate		
Lab	Automated	
9	40.72	0.000
Median	40.72	0.000

040.99 Indirect Available Phosphate		
Lab	Other	
34	40.98	0.000
Median	40.98	0.000

040.XX Indirect Available Phosphate		
Lab	Total Method	
31	41.17	-1.838
61	41.08	-1.283
Std Dev	41.04	-1.000
34	40.98	-0.629
113	40.95	-0.433
24	40.91	-0.172
9	40.91	-0.155
Median	40.88	0.000
23	40.86	0.155
24	40.85	0.253
140	40.76	0.842
23	40.75	0.907
Std Dev	40.73	1.000
9	40.72	1.103
61	40.71	1.136

041.10 Direct Available Phosphate		
Lab	Gravimetric Quimociac	
219	40.92	-1.104
Std Dev	40.90	-1.000
107	40.78	0.000
Median	40.78	0.000
Std Dev	40.65	1.000
47	40.58	1.576

041.20 Direct Available Phosphate		
Lab	Spectrometric	

47	40.55	-0.670
275	40.52	0.000
Median	40.52	0.000
Std Dev	40.48	1.000
275	40.43	2.010

041.40 Direct Available Phosphate		
Lab	Automated	
49	39.64	0.000
Median	39.64	0.000

041.50 Direct Available Phosphate		
Lab	ICP	
66	39.85	-1.340
Std Dev	39.76	-1.000
Median	39.50	0.000
Std Dev	39.24	1.000
80	39.15	1.340

041.60 Direct Available Phosphate		
Lab	EDTA Extract	
77	40.79	-0.367
29	40.70	-0.116
Median	40.66	0.000
219	40.63	0.116
Std Dev	40.33	1.000
137	39.24	4.296

041.XX Direct Available Phosphate		
Lab	Total Method	
219	40.92	-0.574
77	40.79	-0.370
107	40.78	-0.354
29	40.70	-0.239
219	40.63	-0.118
47	40.58	-0.039
47	40.55	0.000
Median	40.55	0.000
275	40.52	0.047
275	40.43	0.189
Std Dev	39.91	1.000
66	39.85	1.101
49	39.64	1.439
137	39.24	2.060

80	39.15	2.202
048.20 Water Soluble Phosphate Spectrometric		
Lab		
9	36.65	-2.026
31	36.56	-1.404
61	36.53	-1.212
23	36.51	-1.117
Std Dev	36.49	-1.000
111	36.43	-0.606
61	36.37	-0.223
24	36.35	-0.096
14	36.34	0.000
Median	36.34	0.000
113	36.33	0.032
23	36.29	0.287
24	36.29	0.319
14	36.24	0.638
Std Dev	36.18	1.000
275	36.03	1.946
140	35.97	2.361
330	35.11	7.817

048.99 Water Soluble Phosphate Other		
Lab		
32	37.15	-1.460
Std Dev	37.00	-1.000
32	36.80	-0.343
9	36.69	0.000
Median	36.69	0.000
34	36.38	0.997
Std Dev	36.37	1.000
111	36.27	1.348

048.XX Water Soluble Phosphate Total Method		
Lab		
32	37.15	-4.166
32	36.80	-2.309
9	36.69	-1.738
9	36.65	-1.552
31	36.56	-1.035
Std Dev	36.55	-1.000
61	36.53	-0.876
23	36.51	-0.796

111	36.43	-0.371
34	36.38	-0.080
61	36.37	-0.053
Median	36.36	0.000
24	36.35	0.053
14	36.34	0.133
113	36.33	0.159
23	36.29	0.371
24	36.29	0.398
111	36.27	0.504
14	36.24	0.663
Std Dev	36.17	1.000
275	36.03	1.751
140	35.97	2.096
330	35.11	6.634

050.50 %K ₂ O Soluble Potash ICP(Oxalate)		
Lab		
23	0.12	0.000
23	0.12	0.000
99	0.12	0.000
Median	0.12	0.000

050.51 %K ₂ O Soluble Potash ICP(Citrate)		
Lab		
137	0.14	0.000
Median	0.14	0.000

050.99 %K ₂ O Soluble Potash Other		
Lab		
80	0.15	-1.531
111	0.15	-1.149
Std Dev	0.14	-1.000
61	0.14	-0.766
24	0.13	0.000
61	0.13	0.000
Median	0.13	0.000
24	0.13	0.383
31	0.12	0.766
Std Dev	0.12	1.000
330	0.11	1.531

050.XX %K ₂ O Soluble Potash Total Method		
Lab		

80	0.15	-1.855
111	0.15	-1.443
61	0.14	-1.031
Std Dev	0.14	-1.000
137	0.14	-0.618
24	0.13	-0.206
61	0.13	-0.206
Median	0.13	0.000
24	0.13	0.206
23	0.12	0.618
23	0.12	0.618
31	0.12	0.618
99	0.12	0.618
Std Dev	0.12	1.000
330	0.11	1.443

060.00 Free Water Vacuum Oven		
Lab		
31	0.87	-2.048
24	0.83	-1.506
24	0.80	-1.204
32	0.80	-1.144
Std Dev	0.78	-1.000
32	0.74	-0.482
140	0.74	-0.422
34	0.71	-0.060
23	0.70	0.000
Median	0.70	0.000
111	0.68	0.241
9	0.68	0.271
9	0.67	0.391
23	0.65	0.662
Std Dev	0.62	1.000
113	0.57	1.626
61	0.51	2.349
61	0.46	2.951

060.99 Free Water Other		
Lab		
14	1.02	-1.289
14	1.00	-1.204
Std Dev	0.93	-1.000
275	0.64	0.000
Median	0.64	0.000

275	0.60	0.136
330	0.54	0.339

060.XX Free Water Total Method		
Lab		
14	1.02	-2.660
14	1.00	-2.458
31	0.87	-1.451
24	0.83	-1.088
Std Dev	0.81	-1.000
24	0.80	-0.887
32	0.80	-0.846
32	0.74	-0.403
140	0.74	-0.363
34	0.71	-0.121
23	0.70	-0.081
Median	0.69	0.000
111	0.68	0.081
9	0.68	0.101
9	0.67	0.181
23	0.65	0.363
275	0.64	0.403
275	0.60	0.725
Std Dev	0.57	1.000
113	0.57	1.008
330	0.54	1.209
61	0.51	1.491
61	0.46	1.894

101.00 Acid Soluble Calcium Atomic Absorption		
Lab	%CaO	
219	0.23	0.000
Median	0.23	0.000

101.30 Acid Soluble Calcium ICP		
Lab	%CaO	
111	0.74	-13.507
32	0.50	-3.430
61	0.45	-1.286
Std Dev	0.44	-1.000
23	0.44	-0.858
34	0.43	-0.214
61	0.43	-0.214
9	0.42	-0.107

32	0.42	0.000
Median	0.42	0.000
24	0.42	0.214
24	0.42	0.214
23	0.41	0.643
9	0.40	0.965
Std Dev	0.40	1.000
31	0.39	1.286
14	0.39	1.501
14	0.30	5.146

101.99	Acid Soluble Calcium	
Lab	%CaO	Other
219	0.25	0.000
Median	0.25	0.000

101.XX	Acid Soluble Calcium	
Lab	%CaO	Total Method
111	0.74	-12.251
32	0.50	-3.254
61	0.45	-1.340
Std Dev	0.44	-1.000

23	0.44	-0.957
34	0.43	-0.383
61	0.43	-0.383
9	0.42	-0.287
32	0.42	-0.191
24	0.42	0.000
24	0.42	0.000
Median	0.42	0.000

23	0.41	0.383
9	0.40	0.670
31	0.39	0.957
Std Dev	0.39	1.000
14	0.39	1.149
14	0.30	4.403
219	0.25	6.183
219	0.23	7.198

121.00	Acid Soluble Magnesium	
Lab	%MgO	Atomic Absorption
219	0.58	0.000
Median	0.58	0.000

121.30	Acid Soluble Magnesium	
Lab	%MgO	ICP
61	0.84	-1.225
Std Dev	0.83	-1.000
24	0.83	-0.919
34	0.83	-0.613
32	0.82	-0.306
23	0.82	-0.306
23	0.82	-0.306
32	0.82	-0.306
Median	0.82	0.000

24	0.81	0.306
9	0.80	0.919
61	0.80	0.919
Std Dev	0.80	1.000
9	0.80	1.072
14	0.78	2.144
14	0.77	2.757
31	0.12	42.574

121.99	Acid Soluble Magnesium	
Lab	%MgO	Other
330	0.81	-0.455
111	0.76	0.000
Median	0.76	0.000
Std Dev	0.66	1.000
219	0.54	2.225

121.XX	Acid Soluble Magnesium	
Lab	%MgO	Total Method
61	0.84	-0.917
24	0.83	-0.776
34	0.83	-0.635
32	0.82	-0.494
23	0.82	-0.494
23	0.82	-0.494
32	0.82	-0.494
24	0.81	-0.212
330	0.81	-0.071
Median	0.80	0.000
9	0.80	0.071
61	0.80	0.071
9	0.80	0.141
14	0.78	0.635

14	0.77	0.917
Std Dev	0.77	1.000
111	0.76	1.199
219	0.58	6.319
219	0.54	7.405
31	0.12	19.254

144..01	Sulfate Sulfur (S)	
Lab		Gravimetric
219	9.81	-0.003
47	9.80	0.000
Median	9.80	0.000
Std Dev	8.03	1.000
113	5.07	2.677

144.99	Sulfate Sulfur (S)	
Lab		Other
330	21.60	-11.974
61	9.91	-3.524
14	7.93	-2.089
14	7.90	-2.071
Std Dev	6.42	-1.000

31	5.77	-0.531
38	5.34	-0.220
34	5.11	-0.051
32	5.04	0.000
Median	5.04	0.000
23	5.03	0.004
23	5.00	0.029
9	4.99	0.031
32	4.97	0.047
9	4.97	0.051
275	4.62	0.300
275	4.60	0.318

144.XX	Sulfate Sulfur (S)	
Lab		Total Method
330	21.60	-7.564
61	9.91	-2.209
219	9.81	-2.161
47	9.80	-2.159
14	7.93	-1.300
14	7.90	-1.289
Std Dev	7.27	-1.000

31	5.77	-0.313
38	5.34	-0.116
34	5.11	-0.008
Median	5.09	0.000
113	5.07	0.008
32	5.04	0.024
23	5.03	0.026
23	5.00	0.042
9	4.99	0.043
32	4.97	0.053
9	4.97	0.056
275	4.62	0.214
275	4.60	0.225

145.99	Total Sulfur (S)	
Lab		Other
77	10.63	-1.805
Std Dev	10.48	-1.000
34	10.41	-0.646
32	10.40	-0.566
32	10.39	-0.539
49	10.37	-0.404
113	10.35	-0.323
24	10.34	-0.242
49	10.30	-0.027
Median	10.29	0.000
23	10.29	0.027
24	10.29	0.027
23	10.23	0.323
137	10.19	0.539
Std Dev	10.10	1.000
275	9.92	1.993
275	9.73	3.044
99	9.41	4.767
330	7.20	16.646

145.XX	Total Sulfur (S)	
Lab		Total Method
77	10.63	-1.805
Std Dev	10.48	-1.000
34	10.41	-0.646
32	10.40	-0.566
32	10.39	-0.539
49	10.37	-0.404

113	10.35	-0.323
24	10.34	-0.242
49	10.30	-0.027
Median	10.29	0.000
23	10.29	0.027
24	10.29	0.027
23	10.23	0.323
137	10.19	0.539
Std Dev	10.10	1.000
275	9.92	1.993
275	9.73	3.044
99	9.41	4.767
330	7.20	16.646

151.30 Total Arsenic		
Lab		ICP
113	15.00	-6.253
Std Dev	12.06	-1.000
61	11.50	0.000
61	11.50	0.000
Median	11.50	0.000
Std Dev	10.94	1.000
24	10.75	1.340
31	8.20	5.896

151.99 Total Arsenic		
Lab		Other
18	11.80	-1.904
Std Dev	11.31	-1.000
140	10.77	0.000
Median	10.77	0.000
18	10.35	0.776

151.XX Total Arsenic		
Lab		Total Method
113	15.00	-5.599
Std Dev	11.83	-1.000
18	11.80	-0.963
61	11.50	-0.529
61	11.50	-0.529
Median	11.14	0.000
140	10.77	0.529
24	10.75	0.558
Std Dev	10.44	1.000

18	10.35	1.137
31	8.20	4.252

165.99 Acid Soluble Boron		
Lab	PPM	Other
330	112.51	-1.340
Std Dev	102.52	-1.000
Median	73.11	0.000
Std Dev	43.70	1.000
24	33.70	1.340

165.XX, ppm Acid Soluble Boron		
Lab	PPM	Total Method
330	112.51	-1.340
Std Dev	102.52	-1.000
Median	73.11	0.000
Std Dev	43.70	1.000
24	33.70	1.340

181.00 Total Cadmium		
Lab		Atomic Absorbion
330	4.00	0.000
Median	4.00	0.000

181.30 Total Cadmium		
Lab	PPM	ICP
113	3.50	-0.816
18	3.35	-0.573
275	3.25	-0.410
275	3.20	-0.321
Median	3.00	0.000
61	2.80	0.321
61	2.75	0.402
Std Dev	2.38	1.000
31	1.55	2.351
111	1.50	2.432

181.99 Total Cadmium		
Lab		Other
18	3.15	-1.340
Std Dev	3.15	-1.000
Median	3.14	0.000
Std Dev	3.12	1.000
24	3.12	1.340

181.XX Total Cadmium		
Lab	PPM	Total Method
330	4.00	-2.170
Std Dev	3.54	-1.000
113	3.50	-0.893
18	3.35	-0.510
275	3.25	-0.255
275	3.20	-0.115
18	3.15	0.000
Median	3.15	0.000
24	3.12	0.077
61	2.80	0.893
Std Dev	2.76	1.000
61	2.75	1.021
31	1.55	4.084
111	1.50	4.211

190.00 Aluminum		
Lab	%Al ₂ O ₃	ICP
9	1.60	-1.588
9	1.60	-1.588
Std Dev	1.58	-1.000
24	1.58	-0.993
23	1.58	-0.794
32	1.57	-0.596
24	1.57	-0.397
23	1.56	-0.199
Median	1.56	0.000
14	1.55	0.199
32	1.55	0.199
14	1.54	0.596
34	1.54	0.596
61	1.53	0.993
Std Dev	1.53	1.000
61	1.47	3.573
111	1.10	18.264

190.99 Aluminum		
Lab	%Al ₂ O ₃	Atomic Absorption
330	1.58	-1.340
Std Dev	1.57	-1.000
Median	1.53	0.000
Std Dev	1.49	1.000

31	1.48	1.340
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190.XX Aluminum		
Lab	%Al ₂ O ₃	Total Method
9	1.60	-1.383
9	1.60	-1.383
Std Dev	1.58	-1.000
24	1.58	-0.865
330	1.58	-0.865
23	1.58	-0.692
32	1.57	-0.519
24	1.57	-0.346
23	1.56	-0.173
Median	1.56	0.000
14	1.55	0.173
32	1.55	0.173
14	1.54	0.519
34	1.54	0.519
61	1.53	0.865
Std Dev	1.53	1.000
31	1.48	2.594
61	1.47	3.112
111	1.10	15.907

191.00 Total Chromium		
Lab		Atomic Absorbion
330	80.00	0.000
Median	80.00	0.000

191.30 Total Chromium		
Lab		ICP
113	73.00	-0.948
31	72.90	-0.907
61	71.00	-0.124
18	70.70	0.000
Median	70.70	0.000
61	69.00	0.701
18	68.40	0.948
Std Dev	68.27	1.000
111	68.00	1.113

191.99 Total Chromium		
Lab	PPM	Other
24	68.80	0.000

Median	68.80	0.000
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191.XX	Total Chromium	
Lab	PPM	Total Method
330	80.00	-3.040
Std Dev	73.76	-1.000
113	73.00	-0.752
31	72.90	-0.719
61	71.00	-0.098
18	70.70	0.000
Median	70.70	0.000
61	69.00	0.556
24	68.80	0.621
18	68.40	0.752
111	68.00	0.882

202.30	Acid Soluble Cobalt	
Lab	PPM	ICP
330		

202.99	Acid Soluble Cobalt	
Lab		Other
24	2.34	0.000
Median	2.34	0.000

202.XX	Acid Soluble Cobalt	
Lab	PPM	Total Method
330	3.00	-1.106
Std Dev	2.91	-1.000
61	2.70	-0.740
61	2.65	-0.679
24	2.34	-0.295
Median	2.09	0.000
18	1.85	0.295
18	1.70	0.478
Std Dev	1.27	1.000
31	1.15	1.148
111	0.50	1.940

221.00	Acid Soluble Copper	
Lab		Atomic Absorption
330	10.00	-1.340
Std Dev	8.88	-1.000
Median	5.59	0.000
Std Dev	2.30	1.000

219	1.18	1.340
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221.30	Acid Soluble Copper	
Lab	PPM	ICP
61	<0.4	0.000
61	<0.4	0.000
111	5.50	-2.525
Std Dev	4.02	-1.000
18	3.05	0.000
Median	3.05	0.000
18	2.90	0.155

221.99	Acid Soluble Copper	
Lab		Other
24	0.90	0.000
Median	0.90	0.000

221.XX	Acid Soluble Copper	
Lab	PPM	Total Method
61	<0.4	0.000
61	<0.4	0.000
330	10.00	-3.582
111	5.50	-1.263
Std Dev	4.99	-1.000
18	3.05	0.000
Median	3.05	0.000
18	2.90	0.077
24	0.90	1.108

241.30	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	ICP
23	1.23	-3.477
23	1.22	-3.187
24	1.18	-2.028
24	1.15	-1.159
32	1.15	-1.159
Std Dev	1.14	-1.000
34	1.14	-0.724
14	1.12	-0.145
9	1.11	0.000
32	1.11	0.000
Median	1.11	0.000
111	1.11	0.000
9	1.11	0.072

14	1.10	0.290
31	1.08	0.869
Std Dev	1.08	1.000
61	1.08	1.014
61	1.07	1.304

241.99	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	Other
330	1.20	-1.340
Std Dev	1.19	-1.000
Median	1.16	0.000
Std Dev	1.13	1.000
219	1.12	1.340

241.XX	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	Total Method
23	1.23	-2.454
23	1.22	-2.238
330	1.20	-1.806
24	1.18	-1.375
219	1.18	-1.310
Std Dev	1.16	-1.000
24	1.15	-0.728
32	1.15	-0.728
34	1.14	-0.404
219	1.12	-0.027
Median	1.12	0.000
14	1.12	0.027
9	1.11	0.135
32	1.11	0.135
111	1.11	0.135
9	1.11	0.189
14	1.10	0.351
31	1.08	0.782
61	1.08	0.890
Std Dev	1.07	1.000
61	1.07	1.105

251.00	Total Lead	
Lab		Atomic Absorption
330	1.00	0.000
Median	1.00	0.000

251.30	Total Lead	
Lab	PPM	ICP
18	5.80	-2.439
18	5.05	-1.958
Std Dev	3.56	-1.000
275	2.80	-0.514
275	2.50	-0.321
Median	2.00	0.000
31	1.50	0.321
61	1.35	0.417
61	1.05	0.610
111	0.50	0.963

251.99	Total Lead	
Lab		Other
24	2.09	0.000
Median	2.09	0.000

251.XX	Total Lead	
Lab	PPM	Total Method
18	5.80	-3.356
18	5.05	-2.728
Std Dev	2.99	-1.000
275	2.80	-0.844
275	2.50	-0.593
24	2.09	-0.245
Median	1.79	0.000
31	1.50	0.245
61	1.35	0.371
61	1.05	0.622
330	1.00	0.664
Std Dev	0.60	1.000
111	0.50	1.082

261.30	Acid Soluble Manganese	
Lab		ICP
330	351.00	-2.050
Std Dev	339.83	-1.000
31	329.20	0.000
Median	329.20	0.000
111	322.50	0.630

261.99	Acid Soluble Manganese	
Lab	PPM	Other

219	347.55	-2.408
219	339.00	-1.399
Std Dev	335.62	-1.000
61	334.50	-0.868
18	327.15	0.000
Median	327.15	0.000
18	326.30	0.100
24	324.50	0.313
61	320.00	0.844

261.XX	Acid Soluble Manganese	
Lab	PPM	Total Method
330	351.00	-2.366
219	347.55	-2.009
219	339.00	-1.122
Std Dev	337.82	-1.000
61	334.50	-0.656
31	329.20	-0.106
Median	328.18	0.000
18	327.15	0.106
18	326.30	0.194
24	324.50	0.381
111	322.50	0.588
61	320.00	0.848

281.30	Total Mercury	
Lab	PPM	ICP
24	<0.001	0.000
Median	0.00	0.000

281.XX	Total Mercury	
Lab	PPM	Total Method
24	<0.001	0.000
Median	0.00	0.000

289.30	Total Molybdenum	
Lab	PPM	ICP
18		

289.99	Total Molybdenum	
Lab	PPM	Other
24	12.80	0.000
Median	12.80	0.000

289.XX	Total Molybdenum	
Lab	PPM	Total Method
24	12.80	-1.359
Std Dev	12.32	-1.000
18	12.15	-0.868
18	11.90	-0.679
61	11.00	0.000
61	11.00	0.000
Median	11.00	0.000
111	10.50	0.377
Std Dev	9.68	1.000
31	9.25	1.321
330	0.00	8.304

291.30	Total Nickel	
Lab		ICP
330		

291.99	Total Nickel	
Lab	PPM	Other
24	12.70	0.000
Median	12.70	0.000

291.XX	Total Nickel	
Lab	PPM	Total Method
330	16.50	-8.162
Std Dev	13.56	-1.000
61	13.50	-0.853
31	13.35	-0.487
18	13.15	0.000
Median	13.15	0.000
61	13.00	0.365
18	12.75	0.975
Std Dev	12.74	1.000
24	12.70	1.096

301.30	Total Selenium	
Lab	PPM	ICP
61	<0.2	0.000
18	1.85	-1.436
Std Dev	1.51	-1.000
18	1.40	-0.861
24	0.73	0.000
Median	0.73	0.000
61	0.35	0.479

111	0.00	0.925
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301.99	Total Selenium	
Lab	PPM	Other
140	1.18	0.000
Median	1.18	0.000

301.XX	Total Selenium	
Lab	PPM	Total Mthod
61	<0.2	0.000
18	1.85	-1.334
Std Dev	1.63	-1.000
18	1.40	-0.665
140	1.18	-0.338
Median	0.95	0.000
24	0.73	0.338
61	0.35	0.896
Std Dev	0.28	1.000
111	0.00	1.416

311.00	Sodium	
Lab	%Na ₂ O	Atomic Absorbtion
330	0.28	0.000
Median	0.28	0.000

311.99	Sodium	
Lab	%Na ₂ O	Other
111	0.30	-6.803
Std Dev	0.22	-1.000
23	0.22	-0.618
61	0.22	-0.618
23	0.22	-0.206
Median	0.21	0.000
31	0.21	0.206
24	0.21	0.618
Std Dev	0.20	1.000
24	0.20	1.031
61	0.20	1.443

311.XX	Sodium	
Lab	%Na ₂ O	Total Method
111	0.30	-7.147
330	0.28	-5.807
Std Dev	0.23	-1.000

23	0.22	-0.447
61	0.22	-0.447
23	0.22	0.000
Median	0.22	0.000
31	0.21	0.447
24	0.21	0.893
Std Dev	0.20	1.000
24	0.20	1.340
61	0.20	1.787

321.00	Acid Soluble Zinc	
Lab		Atomic Absorption
275	0.99	-1.229
Std Dev	0.99	-1.000
219	0.98	-0.737
275	0.97	0.000
Median	0.97	0.000
77	0.96	0.603
Std Dev	0.95	1.000
49	0.92	2.297

321.30	Acid Soluble Zinc	
Lab	PPM	ICP
111	38.00	-1525.332
31	1.44	-17.935
Std Dev	1.03	-1.000
18	1.02	-0.618
24	1.02	-0.618
24	1.02	-0.618
32	1.01	-0.206
32	1.01	0.000
137	1.01	0.000
Median	1.01	0.000
23	1.00	0.412
47	1.00	0.412
23	0.99	0.825
Std Dev	0.98	1.000
66	0.96	1.814
61	0.94	2.680
61	0.94	2.680

321.99	Acid Soluble Zinc	
Lab		Other
330	1.24	-2.266

Std Dev	1.13	-1.000
38	1.08	-0.376
Median	1.04	0.000
34	1.01	0.376
219	0.97	0.837

321.XX Acid Soluble Zinc		
Lab	PPM	Total Method
111	38.00	-966.602
31	1.44	-11.624
330	1.24	-6.400
38	1.08	-2.103
Std Dev	1.03	-1.000
18	1.02	-0.653
24	1.02	-0.653
24	1.02	-0.653
32	1.01	-0.392
34	1.01	-0.392
32	1.01	-0.261
137	1.01	-0.261
23	1.00	0.000
47	1.00	0.000
Median	1.00	0.000
275	0.99	0.052
23	0.99	0.261
219	0.98	0.319
219	0.97	0.656
275	0.97	0.718
66	0.96	0.888
Std Dev	0.96	1.000
77	0.96	1.045
61	0.94	1.437
61	0.94	1.437
49	0.92	1.963

325.10 Fluoride		
Lab	%	Electrode
32	1.83	-0.834
32	1.81	-0.744
23	1.73	-0.268
23	1.73	-0.268
24	1.73	-0.238
24	1.70	-0.089
9	1.69	0.000

Median	1.69	0.000
34	1.68	0.060
9	1.65	0.238
14	1.51	1.072
14	1.50	1.102
31	1.11	3.424
111	1.02	3.990

325.99 Fluoride		
Lab	%	Other
330	1.95	-1.914
61	1.88	0.000
Median	1.88	0.000
61	1.85	0.766

325.XX Fluoride		
Lab	%	Total Method
330	1.95	-1.562
61	1.88	-1.069
61	1.85	-0.871
32	1.83	-0.740
32	1.81	-0.641
23	1.73	-0.115
23	1.73	-0.115
24	1.73	-0.082
Median	1.71	0.000
24	1.70	0.082
9	1.69	0.181
34	1.68	0.247
9	1.65	0.444
14	1.51	1.365
14	1.50	1.398
31	1.11	3.962
111	1.02	4.587