

AFPC

2017-01

Grade

18-46-0

Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
AMMONIACAL NITROGEN					
Ammoniacal Nitrogen, MgO distillation	920.03	001.10	1	17.29	0.00
Ammoniacal Nitrogen, Other		001.99	10	16.82	0.17
Method Group 001.XX PCT			11	16.83	0.18
TOTAL NITROGEN					
Total Nitrogen, Modified Comprehensive	978.02	010.11	2	17.81	0.01
Total Nitrogen, Salicylic	955.04d	010.12	1	17.70	0.00
Total Nitrogen, Combustion	993.13	010.60	23	17.77	0.15
Total Nitrogen, Other		010.99	6	17.62	0.25
Method Group 010.XX PCT			32	17.77	0.19
TOTAL PHOSPHATE					
Total Phosphate, Gravimetric Quimociac		020.10	2	46.19	0.05
Total Phosphate, Spectrometric	978.02	020.20	21	46.00	0.21
Total Phosphate, ICP	970.03	020.40	3	45.76	0.34
Total Phosphate, ICP, Lithium	970.02	020.50	1	46.31	0.00
Method Group 020.XX PCT			27	46.01	0.31
INSOLUBLE PHOSPHATE					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	10	0.17	0.04
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.09	0.00
Insoluble Phosphate, Automated	978.01	030.40	3	0.25	0.03
Insoluble Phosphate, Other		030.99	2	0.12	0.01
Method Group 030.XX PCT			16	0.17	0.08
INDIRECT AVAILABLE PHOSPHATE					
Indirect Available Phosphate, Spectrometric	960.02	040.20	11	45.83	0.18
Indirect Available Phosphate, Automated	960.02	040.40	2	45.55	0.03
Indirect Available Phosphate, Other		040.99	1	45.87	0.00
Method Group 040.XX PCT			14	45.83	0.30
DIRECT AVAILABLE PHOSPHATE					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	2	46.33	0.07
Direct Available Phosphate, Spectrometric	960.03D	041.20	2	44.99	0.25
Direct Available Phosphate, Automated	978.01	041.40	1	46.40	0.00
Direct Available Phosphate, ICP		041.50	4	45.53	0.27
Direct Available Phosphate, EDTA Extract	993.01	041.60	3	46.14	0.16
Direct Available Phosphate, Other		041.99	1	45.94	0.00
Method Group 041.XX PCT			13	45.94	0.73
WATER SOLUBLE PHOSPHATE					
Water Soluble Phosphate, Spectrometric	970.01	048.20	13	41.10	0.16
Water Soluble Phosphate, Other		048.99	8	41.27	1.24
Method Group 048.XX PCT			21	41.14	0.34
SOLUBLE POTASH AS K₂O					
Soluble Potash, ICP(Oxalate)		050.50	3	0.09	0.03
Soluble Potash, ICP(Citrate)		050.51	1	0.11	0.00
Soluble Potash, Other		050.99	6	0.11	0.00
Method Group 050.XX PCT			10	0.11	0.01
FREE WATER					
Free Water, Vacuum Oven	965.08B	060.00	15	2.17	0.15
Free Water, Vacuum Desiccate	965.08A	060.10	2	1.60	0.20
Free Water, Other		060.99	2	1.14	0.01
Method Group 060.XX PCT			19	2.14	0.21
ACID SOLUBLE CALCIUM AS CaO					
Acid Soluble Calcium, Atomic Absorption	945.04	101.00	1	0.19	0.00
Acid Soluble Calcium, ICP		101.30	15	0.33	0.03
Acid Soluble Calcium, Other		101.99	1	0.19	0.00
Method Group 101.XX PCT			17	0.32	0.04
ACID SOLUBLE MAGNESIUM AS MgO					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	0.90	0.00
Acid Soluble Magnesium, ICP		121.30	14	1.54	0.03

Acid Soluble Magnesium, Other	121.99	2	1.37	0.12
Method Group 121.XX PCT		17	1.53	0.05
SULFATE SULFUR (S)				
Sulfur, Gravimetric	980.02(a) 144.01	2	1.28	0.02
Sulfur, Other	144.99	15	1.25	0.02
Method Group 144.XX PCT		17	1.25	0.03
TOTAL SULFUR (S)				
Sulfur, Other	145.99	1	1.17	0.0
Method Group 145.XX PCT		1	1.17	0.0
TOTAL ARSENIC				
Total Arsenic, ICP	980.02(b) 151.02	7	16.0	1.5
Total Arsenic, Other	151.99	3	17.5	3.3
Method Group 151.XX PPM		10	16.5	2.1
ACID SOLUBLE BORON				
Acid Soluble Boron, Other	165.99	1	38	0.0
Method Group 165.XX PPM		1	38	0.0
TOTAL CADMIUM				
Total Cadmium, ICP	181.30	9	3.9	0.7
Total Cadmium, Other	181.99	1	3.9	0.0
Method Group 181.XX PPM		10	3.9	0.9
ALUMINUM AS Al₂O₃				
ICP, %		14	1.32	0.04
Water Soluble Chlorine, Other, %	190.99	1	1.36	0.00
Method Group 190.XX PCT		15	1.32	0.05
TOTAL CHROMIUM				
Total Chromium, ICP	191.30	9	103	3.1
Total Chromium, Other	191.99	1	108	0.0
Method Group 191.XX PPM		10	105	4.3
ACID SOLUBLE COBALT				
Acid Soluble Cobalt, ICP	202.30	7	4	0.5
Acid Soluble Cobalt, Other	202.99	1	4	0.0
Method Group 202.XX PPM		8	4	0.6
ACID SOLUBLE COPPER				
Method Group 221.XX PPM		3	3.0	1.6
ACID SOLUBLE IRON AS Fe₂O₃				
Acid Soluble Iron, ICP	241.30	15	1.70	0.04
Acid Soluble Iron, Other	241.99	1	1.71	0.00
Method Group 241.XX PCT		17	1.70	0.05
TOTAL LEAD				
Total Lead, ICP	251.30	5	4	3.7
Method Group 251.XX PPM		5	4	4.5
ACID SOLUBLE MANGANESE				
Acid Soluble Manganese, ICP	972.02a 261.30	2	288	7.4
Acid Soluble Manganese, Other	261.99	7	299	12.3
Method Group 261.XX PPM		9	298	19.5
TOTAL MERCURY				
Total Mercury, ICP	281.30	1	0.00	0.00
Method Group 281.XX PPM		1	0.01	0.00
TOTAL MOLYBDENUM				
Total Molybdenum, ICP	289.30	8	9	3.3
Total Molybdenum, Other	289.99	1	10	0.0
Method Group 289.XX PPM		9	10	3.8
TOTAL NICKEL				
Total Nickel, ICP	291.30	8	14.4	0.8
Total Nickel, icp	291.99	1	16.1	0.0
Method Group 291.XX PPM		9	14.6	0.8
TOTAL SELENIUM				
Total Selenium, ICP	301.30	5	0.1	1.0
Total Selenium, Other	301.99	1	1	0.0
Method Group 301.XX PPM		6	0.4	1.0
SODIUM AS Na₂O				
Sodium, Other	311.99	8	0.26	0.02

Method Group 311.XX PCT		8	0.26	0.02
ACID SOLUBLE ZINC				
Acid Soluble Zinc, Atomic Absorption	975.02 321.00	1	49.6	0.0
Acid Soluble Zinc, ICP	321.30	8	52.7	4.8
Acid Soluble Zinc, Other	321.99	1	41.3	0.0
Method Group 321.XX %		10	50.7	5.7
FLUORIDE				
Volumetric	325.10	12	1.90	0.07
Distilled/Electrode	325.99	4	1.87	0.04
Method Group 325.XX PCT		16	1.89	0.08

001.10 Ammoniacal Nitrogen		
Lab	MgO distillation	
113	17.29	0.000
Median	17.29	0.000

001.99 Ammoniacal Nitrogen		
Lab	Other	
140	16.88	-0.379
24	16.88	-0.348
32	16.88	-0.348
24	16.84	-0.136
34	16.83	-0.076
Median	16.82	0.000
61	16.81	0.076
32	16.75	0.409
Std Dev	16.65	1.000
61	16.61	1.257
38	16.56	1.560
340	15.53	7.798

001.XX Ammoniacal Nitrogen		
Lab	Total Method	
113	17.29	-3.161
Std Dev	16.98	-1.000
140	16.88	-0.344
24	16.88	-0.309
32	16.88	-0.309
24	16.84	-0.069
34	16.83	0.000
Median	16.83	0.000
61	16.81	0.172
32	16.75	0.550
Std Dev	16.68	1.000
61	16.61	1.512
38	16.56	1.855
340	15.53	8.933

010.11 Total Nitrogen		
Lab	Modified Comprehensive	
113	17.83	-1.340
Std Dev	17.82	-1.000
Median	17.81	0.000
Std Dev	17.79	1.000
219	17.79	1.340

010.12 Total Nitrogen		
Lab	Salicylic	
107	17.70	0.000
Median	17.70	0.000

010.60 Total Nitrogen		
Lab	Combustion	
80	18.95	-8.109
137	18.65	-6.047
14	18.08	-2.096
14	18.04	-1.821
66	17.97	-1.374
Std Dev	17.92	-1.000
47	17.86	-0.618
49	17.84	-0.481
63	17.84	-0.481
39	17.83	-0.395
24	17.82	-0.309
9	17.78	-0.069
219	17.77	0.000
Median	17.77	0.000
31	17.76	0.069
24	17.75	0.137
79	17.73	0.309
9	17.67	0.704
61	17.66	0.756
110	17.65	0.825
Std Dev	17.62	1.000
77	17.62	1.065
111	17.50	1.855
38	17.45	2.199
99	17.41	2.508
103	17.16	4.226

010.99 Total Nitrogen		
Lab	Other	
335	17.91	-1.153
Std Dev	17.87	-1.000
23	17.87	-0.991
23	17.72	-0.405
Median	17.62	0.000
32	17.52	0.405
32	17.49	0.526

140 17.41 0.870

010.XX Total Nitrogen		
Lab	Total Method	
80	18.95	-7.793
137	18.65	-5.820
14	18.08	-2.039
14	18.04	-1.776
66	17.97	-1.348
Std Dev	17.92	-1.000
335	17.91	-0.921
23	17.87	-0.658
47	17.86	-0.625
49	17.84	-0.493
63	17.84	-0.493
39	17.83	-0.411
113	17.83	-0.395
24	17.82	-0.329
219	17.79	-0.132
9	17.78	-0.099
219	17.77	-0.033
Median	17.77	0.000
31	17.76	0.033
24	17.75	0.099
79	17.73	0.263
23	17.72	0.296
107	17.70	0.460
9	17.67	0.641
61	17.66	0.691
110	17.65	0.756
77	17.62	0.987
Std Dev	17.61	1.000
32	17.52	1.611
111	17.50	1.743
32	17.49	1.809
38	17.45	2.072
99	17.41	2.368
140	17.41	2.368
103	17.16	4.012

020.10 Total Phosphate		
Lab	Gravimetric Quimociac	
219	46.26	-1.340
Std Dev	46.24	-1.000

Median	46.19	0.000
Std Dev	46.15	1.000
241	46.13	1.340

020.20 Total Phosphate		
Lab	Spectrometric	
111	46.74	-3.565
61	46.57	-2.728
14	46.46	-2.225
14	46.37	-1.771
61	46.21	-1.005
Std Dev	46.20	-1.000
99	46.20	-0.981
340	46.18	-0.885
31	46.07	-0.335
34	46.06	-0.287
79	46.01	-0.072
24	46.00	0.000
Median	46.00	0.000
24	45.98	0.072
32	45.98	0.072
113	45.98	0.096
32	45.94	0.263
140	45.92	0.359
9	45.87	0.622
Std Dev	45.79	1.000
23	45.54	2.201
23	45.43	2.704
38	44.99	4.798
110	44.61	6.652

020.40 Total Phosphate		
Lab	Automated	
137	46.61	-2.525
Std Dev	46.10	-1.000
9	45.76	0.000
Median	45.76	0.000
219	45.71	0.155

020.50 Total Phosphate		
Lab	ICP	
111	46.31	0.000
Median	46.31	0.000

020.XX Total Phosphate		
Lab	Total Method	
111	46.74	-2.898
137	46.61	-2.382
61	46.57	-2.204
14	46.46	-1.787
14	46.37	-1.409
111	46.31	-1.171
Std Dev	46.26	-1.000
219	46.26	-0.973
61	46.21	-0.774
99	46.20	-0.754
340	46.18	-0.675
241	46.13	-0.476
31	46.07	-0.218
34	46.06	-0.179
79	46.01	0.000
Median	46.01	0.000
24	46.00	0.060
24	45.98	0.119
32	45.98	0.119
113	45.98	0.139
32	45.94	0.278
140	45.92	0.357
9	45.87	0.576
Std Dev	45.76	1.000
9	45.76	1.003
219	45.71	1.211
23	45.54	1.886
23	45.43	2.303
38	44.99	4.040
110	44.61	5.578

030.20 Insoluble Phosphate		
Lab	Spectrometric	
113	0.23	-1.311
140	0.22	-1.083
340	0.22	-1.083
Std Dev	0.22	-1.000
79	0.18	-0.171
61	0.18	-0.057
Median	0.17	0.000
61	0.17	0.057
24	0.16	0.399

23	0.15	0.513
Std Dev	0.13	1.000
23	0.12	1.197
24	0.12	1.197

030.30 Insoluble Phosphate		
Lab	Alka. Quimociac	
31	0.09	0.000
Median	0.09	0.000

030.40 Insoluble Phosphate		
Lab	Automated	
9	0.28	-1.014
Std Dev	0.28	-1.000
9	0.25	0.000
Median	0.25	0.000
Std Dev	0.21	1.000
34	0.19	1.666

030.99 Insoluble Phosphate		
Lab	Other	
32	0.14	-1.340
Std Dev	0.13	-1.000
Median	0.12	0.000
Std Dev	0.11	1.000
32	0.11	1.340

030.XX Insoluble Phosphate		
Lab	Total Method	
9	0.28	-1.623
9	0.25	-1.095
Std Dev	0.24	-1.000
113	0.23	-0.868
140	0.22	-0.717
340	0.22	-0.717
34	0.19	-0.226
79	0.18	-0.113
61	0.18	-0.038
Median	0.17	0.000
61	0.17	0.038
24	0.16	0.264
23	0.15	0.340
32	0.14	0.566
23	0.12	0.793

24	0.12	0.793
32	0.11	0.944
Std Dev	0.11	1.000
31	0.09	1.246

040.20 Indirect Available Phosphate		
Lab	Spectrometric	
61	46.40	-3.122
61	46.03	-1.105
Std Dev	46.01	-1.000
31	45.97	-0.774
340	45.96	-0.718
24	45.88	-0.249
79	45.83	0.000
Median	45.83	0.000
24	45.83	0.028
113	45.75	0.470
140	45.70	0.718
Std Dev	45.65	1.000
23	45.39	2.459
23	45.31	2.873

040.40 Indirect Available Phosphate		
Lab	Automated	
9	45.59	-1.340
Std Dev	45.58	-1.000
Median	45.55	0.000
Std Dev	45.52	1.000
9	45.52	1.340

040.99 Indirect Available Phosphate		
Lab	Other	
34	45.87	0.000
Median	45.87	0.000

040.XX Indirect Available Phosphate		
Lab	Total Method	
61	46.40	-2.340
Std Dev	46.07	-1.000
61	46.03	-0.835
31	45.97	-0.588
340	45.96	-0.546
24	45.88	-0.196
34	45.87	-0.165

79	45.83	-0.010
Median	45.83	0.000
24	45.83	0.010
113	45.75	0.340
140	45.70	0.526
9	45.59	1.000
Std Dev	45.58	1.000
9	45.52	1.288
23	45.39	1.824
23	45.31	2.134

041.10 Direct Available Phosphate		
Lab	Gravimetric Quimociac	
47	46.43	-1.340
Std Dev	46.41	-1.000
Median	46.33	0.000
Std Dev	46.26	1.000
219	46.24	1.340

041.20 Direct Available Phosphate		
Lab	Spectrometric	
47	45.33	-1.340
Std Dev	45.24	-1.000
Median	44.99	0.000
Std Dev	44.74	1.000
38	44.65	1.340

041.40 Direct Available Phosphate		
Lab	Automated	
49	46.40	0.000
Median	46.40	0.000

041.50 Direct Available Phosphate		
Lab	ICP	
63	46.48	-3.494
Std Dev	45.80	-1.000
80	45.55	-0.091
Median	45.53	0.000
64	45.50	0.091
Std Dev	45.25	1.000
66	45.17	1.317

041.60 Direct Available Phosphate		
Lab	EDTA Extract	

137	46.31	-1.028
Std Dev	46.30	-1.000
77	46.14	0.000
Median	46.14	0.000
Std Dev	45.98	1.000
219	45.88	1.652

041.99 Direct Available Phosphate		
Lab		Other
335	45.94	0.000
Median	45.94	0.000

041.XX Direct Available Phosphate		
Lab		Total Method
63	46.48	-0.899
47	46.43	-0.816
49	46.40	-0.766
137	46.31	-0.608
219	46.24	-0.491
77	46.14	-0.333
335	45.94	0.000
Median	45.94	0.000
219	45.88	0.108
80	45.55	0.649
64	45.50	0.732
Std Dev	45.34	1.000
47	45.33	1.015
66	45.17	1.290
38	44.65	2.144

048.20 Water Soluble Phosphate		
Lab		Spectrometric
24	41.29	-1.212
61	41.29	-1.212
Std Dev	41.26	-1.000
31	41.26	-0.989
61	41.22	-0.766
14	41.16	-0.351
79	41.14	-0.223
113	41.10	0.000
Median	41.10	0.000
23	41.03	0.447
24	41.03	0.479
14	41.01	0.574

Std Dev	40.94	1.000
23	40.86	1.531
140	40.69	2.616
111	40.54	3.605

048.99 Water Soluble Phosphate		
Lab		Other
39	46.55	-4.264
9	45.59	-3.493
Std Dev	42.50	-1.000
9	41.37	-0.087
32	41.34	-0.057
Median	41.27	0.000
32	41.20	0.057
34	40.92	0.279
111	40.31	0.771
340	40.03	0.997

048.XX Water Soluble Phosphate		
Lab		Total Method
39	46.55	-19.593
9	45.59	-16.134
Std Dev	41.41	-1.000
9	41.37	-0.860
32	41.34	-0.724
24	41.29	-0.561
61	41.29	-0.561
31	41.26	-0.435
61	41.22	-0.308
32	41.20	-0.217
14	41.16	-0.072
79	41.14	0.000
Median	41.14	0.000
113	41.10	0.127
23	41.03	0.380
24	41.03	0.398
14	41.01	0.453
34	40.92	0.779
23	40.86	0.996
Std Dev	40.86	1.000
140	40.69	1.612
111	40.54	2.173
111	40.31	2.988
340	40.03	4.002

050.50 %K ₂ O Soluble Potash		
Lab		ICP(Oxalate)
23	0.12	-0.893
23	0.09	0.000
Median	0.09	0.000
Std Dev	0.06	1.000
99	0.04	1.787

050.51 %K ₂ O Soluble Potash		
Lab		ICP(Citrate)
137	0.11	0.000
Median	0.11	0.000

050.99 Soluble Potash		
Lab	%K ₂ O	Other
80	0.25	-36.850
Std Dev	0.12	-1.000
24	0.12	-0.670
61	0.12	-0.670
Median	0.11	0.000
61	0.11	0.670
111	0.11	0.670
Std Dev	0.11	1.000
24	0.10	3.350

050.XX Soluble Potash		
Lab	%K ₂ O	Total Method
80	0.25	-15.008
Std Dev	0.12	-1.000
23	0.12	-0.536
24	0.12	-0.536
61	0.12	-0.536
61	0.11	0.000
111	0.11	0.000
137	0.11	0.000
Median	0.11	0.000
Std Dev	0.10	1.000
24	0.10	1.072
23	0.09	2.144
99	0.04	7.504

060.00 Free Water	
Lab	Vacuum Oven

23	2.40	-1.485
31	2.40	-1.485
32	2.36	-1.259
79	2.34	-1.130
Std Dev	2.32	-1.000
32	2.25	-0.549
24	2.24	-0.484
340	2.20	-0.226
140	2.17	0.000
Median	2.17	0.000
111	2.15	0.129
24	2.14	0.194
23	2.09	0.484
34	2.09	0.517
9	2.08	0.581
9	2.03	0.872
Std Dev	2.01	1.000
113	2.00	1.066

060.10 Free Water		
Lab		Vacuum Desiccate
61	1.87	-1.340
Std Dev	1.80	-1.000
Median	1.60	0.000
Std Dev	1.39	1.000
61	1.33	1.340

060.99 Free Water		
Lab		Other
14	1.15	-1.340
Std Dev	1.15	-1.000
Median	1.14	0.000
Std Dev	1.12	1.000
14	1.12	1.340

060.XX Free Water		
Lab		Total Method
23	2.40	-1.515
31	2.40	-1.515
32	2.36	-1.311
79	2.34	-1.194
Std Dev	2.31	-1.000
32	2.25	-0.670
24	2.24	-0.612

340	2.20	-0.379
140	2.17	-0.175
111	2.15	-0.058
24	2.14	0.000
Median	2.14	0.000
23	2.09	0.262
34	2.09	0.291
9	2.08	0.350
9	2.03	0.612
113	2.00	0.787
Std Dev	1.96	1.000
61	1.87	1.573
61	1.33	4.719
14	1.15	5.739
14	1.12	5.913

101.00 Acid Soluble Calcium		
Lab	%CaO	Atomic Absorption
219	0.19	0.000
Median	0.19	0.000

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
32	0.37	-1.210
61	0.37	-1.210
61	0.36	-1.037
Std Dev	0.36	-1.000
111	0.36	-0.865
24	0.35	-0.519
32	0.34	-0.346
24	0.34	-0.173
34	0.33	0.000
Median	0.33	0.000
31	0.32	0.294
14	0.32	0.346
9	0.31	0.605
9	0.31	0.692
23	0.31	0.865
Std Dev	0.30	1.000
14	0.30	1.037
23	0.30	1.037

101.99 Acid Soluble Calcium		
Lab	%CaO	Other

219	0.19	0.000
Median	0.19	0.000

101.XX Acid Soluble Calcium		
Lab	%CaO	Total Method
32	0.37	-1.457
61	0.37	-1.457
61	0.36	-1.290
111	0.36	-1.122
Std Dev	0.35	-1.000
24	0.35	-0.787
32	0.34	-0.620
24	0.34	-0.452
34	0.33	-0.285
31	0.32	0.000
Median	0.32	0.000
14	0.32	0.050
9	0.31	0.302
9	0.31	0.385
23	0.31	0.553
14	0.30	0.720
23	0.30	0.720
Std Dev	0.29	1.000
219	0.19	4.456
219	0.19	4.539

121.00 Acid Soluble Magnesium		
Lab	%MgO	Atomic Absorption
219	0.90	0.000
Median	0.90	0.000

121.30 Acid Soluble Magnesium		
Lab	%MgO	ICP
24	1.61	-2.334
24	1.59	-1.815
23	1.57	-1.124
Std Dev	1.57	-1.000
61	1.56	-0.778
23	1.56	-0.605
32	1.56	-0.605
32	1.54	-0.086
Median	1.54	0.000
34	1.54	0.086
9	1.53	0.346

9	1.52	0.605
61	1.52	0.605
Std Dev	1.51	1.000
14	1.50	1.297
14	1.49	1.643
31	1.49	1.643

121.99 Acid Soluble Magnesium		
Lab	%MgO	Other
111	1.53	-1.340
Std Dev	1.49	-1.000
Median	1.37	0.000
Std Dev	1.25	1.000
219	1.21	1.340

121.XX Acid Soluble Magnesium		
Lab	%MgO	Total Method
24	1.61	-1.827
24	1.59	-1.462
Std Dev	1.57	-1.000
23	1.57	-0.975
61	1.56	-0.731
23	1.56	-0.609
32	1.56	-0.609
32	1.54	-0.244
34	1.54	-0.122
111	1.53	0.000
Median	1.53	0.000
9	1.53	0.061
9	1.52	0.244
61	1.52	0.244
14	1.50	0.731
14	1.49	0.975
31	1.49	0.975
Std Dev	1.49	1.000
219	1.21	7.796
219	0.90	15.410

144.01 Sulfate Sulfur (S)		
Lab	Gravimetric	
241	1.31	-1.340
Std Dev	1.30	-1.000
Median	1.28	0.000
Std Dev	1.26	1.000

79	1.25	1.340
144.99 Sulfate Sulfur (S)		
Lab		Other
340	1.62	-16.303
32	1.34	-4.020
14	1.28	-1.117
24	1.28	-1.117
Std Dev	1.27	-1.000
14	1.26	-0.223
34	1.26	-0.223
61	1.26	-0.223
23	1.25	0.000
Median	1.25	0.000
9	1.25	0.112
9	1.24	0.447
24	1.24	0.447
23	1.23	0.893
Std Dev	1.23	1.000
61	1.23	1.117
31	1.20	2.457
32	1.10	6.700

144.XX Sulfate Sulfur (S)		
Lab	Total Method	
340	1.62	-13.974
32	1.34	-3.446
241	1.31	-2.297
Std Dev	1.28	-1.000
14	1.28	-0.957
24	1.28	-0.957
14	1.26	-0.191
34	1.26	-0.191
61	1.26	-0.191
23	1.25	0.000
79	1.25	0.000
Median	1.25	0.000
9	1.25	0.096
9	1.24	0.383
24	1.24	0.383
23	1.23	0.766
61	1.23	0.957
Std Dev	1.22	1.000
31	1.20	2.106

32	1.10	5.743
145.99	Total Sulfur (S)	
Lab	Other	
111	1.17	0.000
Median	1.17	0.000

145.XX	Total Sulfur (S)	
Lab	Total Method	
111	1.17	0.000
Median	1.17	0.000

151.30	Total Arsenic	
Lab	ICP	
340	17.95	-1.303
Std Dev	17.50	-1.000
61	17.20	-0.802
335	17.08	-0.718
61	16.00	0.000
Median	16.00	0.000
64	15.32	0.458
24	14.95	0.702
Std Dev	14.50	1.000
31	11.75	2.840

151.99	Total Arsenic	
Lab	Other	
18	17.60	-0.046
18	17.45	0.000
Median	17.45	0.000
Std Dev	14.18	1.000
140	8.84	2.634

151.XX	Total Arsenic	
Lab	Total Method	
340	17.95	-0.807
18	17.60	-0.607
18	17.45	-0.521
61	17.20	-0.378
335	17.08	-0.307
Median	16.54	0.000
61	16.00	0.307
64	15.32	0.698
24	14.95	0.907

Std Dev	14.79	1.000
31	11.75	2.734
140	8.84	4.396

165.99	Acid Soluble Boron	
Lab	PPM	Other
24	37.90	0.000
Median	37.90	0.000

165.XX, ppm	Acid Soluble Boron	
Lab	PPM	Total Method
24	37.90	0.000
Median	37.90	0.000

181.30	Total Cadmium	
Lab	PPM	ICP
340	4.45	-0.720
335	4.21	-0.399
18	4.00	-0.117
64	3.94	-0.037
18	3.91	0.000
Median	3.91	0.000
Std Dev	3.17	1.000
61	3.00	1.223
61	3.00	1.223
31	2.85	1.424
111	2.50	1.893

181.99	Total Cadmium	
Lab	Other	
24	3.87	0.000
Median	3.87	0.000

181.XX	Total Cadmium	
Lab	PPM	Total Method
340	4.45	-0.760
335	4.21	-0.434
18	4.00	-0.148
64	3.94	-0.066
18	3.91	-0.029
Median	3.89	0.000
24	3.87	0.029
Std Dev	3.16	1.000
61	3.00	1.212

61	3.00	1.212
31	2.85	1.417
111	2.50	1.893

190.00	Aluminum	
Lab	%Al ₂ O ₃	ICP
14	1.39	-1.563
14	1.39	-1.563
9	1.37	-1.173
9	1.37	-1.117
Std Dev	1.36	-1.000
24	1.35	-0.670
61	1.33	-0.223
23	1.32	0.000
24	1.32	0.000
34	1.32	0.000
Median	1.32	0.000
32	1.31	0.335
32	1.31	0.335
23	1.29	0.782
Std Dev	1.28	1.000
61	1.27	1.117
111	0.93	8.822

190.99	Aluminum	
Lab	%Al ₂ O ₃	Atomic Absorption
31	1.36	0.000
Median	1.36	0.000

190.XX	Aluminum	
Lab	%Al ₂ O ₃	Total Method
14	1.39	-1.631
14	1.39	-1.631
9	1.37	-1.223
9	1.37	-1.165
Std Dev	1.36	-1.000
31	1.36	-0.816
24	1.35	-0.699
61	1.33	-0.233
23	1.32	0.000
24	1.32	0.000
34	1.32	0.000
Median	1.32	0.000
32	1.31	0.350

32	1.31	0.350
23	1.29	0.816
Std Dev	1.28	1.000
61	1.27	1.165
111	0.93	9.205

191.30	Total Chromium	
Lab	ICP	
340	135.50	-10.431
31	109.30	-2.022
64	106.68	-1.180
61	106.50	-1.123
Std Dev	106.12	-1.000
61	103.00	0.000
Median	103.00	0.000
335	102.82	0.059
111	102.50	0.160
18	100.35	0.851
18	100.15	0.915

191.99	Total Chromium	
Lab	PPM	Other
24	107.50	0.000
Median	107.50	0.000

191.XX	Total Chromium	
Lab	PPM	Total Method
340	135.50	-8.739
31	109.30	-1.293
Std Dev	108.27	-1.000
24	107.50	-0.782
64	106.68	-0.547
61	106.50	-0.497
Median	104.75	0.000
61	103.00	0.497
335	102.82	0.550
111	102.50	0.639
Std Dev	101.23	1.000
18	100.35	1.250
18	100.15	1.307

202.30	Acid Soluble Cobalt	
Lab	PPM	ICP
64		

202.99		
Lab	Acid Soluble Cobalt	Other
24	4.36	0.000
Median	4.36	0.000

202.XX		
Lab	PPM	Acid Soluble Cobalt Total Method
64	4.80	-1.651
Std Dev	4.45	-1.000
24	4.36	-0.816
111	4.00	-0.142
18	3.95	-0.047
Median	3.93	0.000
18	3.90	0.047
61	3.50	0.806
Std Dev	3.40	1.000
31	3.03	1.698
61	2.50	2.704

221.00		
Lab	Acid Soluble Copper	Atomic Absorption
219	1.69	0.000
Median	1.69	0.000

221.30		
Lab	PPM	Acid Soluble Copper ICP
61	<0.4	0.000
61	<0.4	0.000
111	5.50	-1.898
Std Dev	4.29	-1.000
18	2.95	0.000
Median	2.95	0.000
18	1.90	0.782

221.99		
Lab	Acid Soluble Copper	Other
24	<0.001	0.000
Median	0.00	0.000

221.XX		
Lab	PPM	Acid Soluble Copper Total Method
61	<0.4	0.000
61	<0.4	0.000
24	<0.001	0.000

111	5.50	-1.898
Std Dev	4.29	-1.000
18	2.95	0.000
Median	2.95	0.000
18	1.90	0.782

241.30		
Lab	%Fe ₂ O ₃	Acid Soluble Iron ICP
32	1.75	-1.218
Std Dev	1.74	-1.000
61	1.74	-0.853
14	1.73	-0.731
23	1.73	-0.731
24	1.73	-0.609
24	1.73	-0.609
34	1.72	-0.365
14	1.70	0.000
Median	1.70	0.000
9	1.69	0.305
9	1.68	0.487
61	1.68	0.609
32	1.67	0.731
111	1.67	0.731
23	1.67	0.853
Std Dev	1.66	1.000
31	1.65	1.340

241.99		
Lab	%Fe ₂ O ₃	Acid Soluble Iron Other
219	1.71	0.000
Median	1.71	0.000

241.XX		
Lab	%Fe ₂ O ₃	Acid Soluble Iron Total Method
32	1.75	-1.340
Std Dev	1.74	-1.000
61	1.74	-0.938
14	1.73	-0.804
23	1.73	-0.804
24	1.73	-0.670
24	1.73	-0.670
34	1.72	-0.402
219	1.71	-0.134
14	1.70	0.000

Median	1.70	0.000
9	1.69	0.335
219	1.69	0.402
9	1.68	0.536
61	1.68	0.670
32	1.67	0.804
111	1.67	0.804
23	1.67	0.938
Std Dev	1.66	1.000
31	1.65	1.474

251.30		
Lab	PPM	Total Lead ICP
61	<1.8	0.000
61	<1.8	0.000
18	7.60	-1.096
Std Dev	7.24	-1.000
18	6.75	-0.866
340	3.55	0.000
Median	3.55	0.000
335	1.80	0.474
111	1.50	0.555

251.99		
Lab	Total Lead	Other
24	<0.0005	0.000
Median	0.00	0.000

251.XX		
Lab	PPM	Total Lead Total Method
61	<1.8	0.000
61	<1.8	0.000
24	<0.0005	0.000
18	7.60	-1.096
Std Dev	7.24	-1.000
18	6.75	-0.866
340	3.55	0.000
Median	3.55	0.000
335	1.80	0.474
111	1.50	0.555

261.30		
Lab	Acid Soluble Manganese ICP	
31	298.20	-1.340

Std Dev	295.70	-1.000
Median	288.35	0.000
Std Dev	281.00	1.000
111	278.50	1.340

261.99		
Lab	PPM	Acid Soluble Manganese Other
61	305.50	-0.504
219	300.90	-0.130
24	300.00	-0.057
219	299.30	0.000
Median	299.30	0.000
61	289.50	0.797
Std Dev	287.01	1.000
18	278.45	1.696
18	276.65	1.842

261.XX		
Lab	PPM	Acid Soluble Manganese Total Method
61	305.50	-0.455
219	300.90	-0.168
24	300.00	-0.112
219	299.30	-0.069
31	298.20	0.000
Median	298.20	0.000
61	289.50	0.542
Std Dev	282.16	1.000
111	278.50	1.228
18	278.45	1.231
18	276.65	1.343

281.30		
Lab	PPM	Total Mercury ICP
24	<0.001	0.000
335	0.01	0.000
Median	0.01	0.000

281.XX		
Lab	PPM	Total Mercury Total Method
24	<0.001	0.000
335	0.01	0.000
Median	0.01	0.000

289.30 Total Molybdenum		
Lab	PPM	ICP
340		

289.99 Total Molybdenum		
Lab	PPM	Other
24	10.20	0.000
Median	10.20	0.000

289.XX Total Molybdenum		
Lab	PPM	Total Method
340	11.70	-0.598
18	11.45	-0.518
18	10.85	-0.327
24	10.20	-0.120
64	9.83	0.000
Median	9.83	0.000
111	9.00	0.263
Std Dev	6.69	1.000
31	6.65	1.013
61	6.50	1.061
61	6.00	1.220

291.30 Total Nickel	
Lab	ICP
340	

291.99 Total Nickel		
Lab	PPM	Other
24	16.05	0.000
Median	16.05	0.000

291.XX Total Nickel		
Lab	PPM	Total Method
340	17.75	-4.661
24	16.05	-2.185
Std Dev	15.24	-1.000
64	15.17	-0.903
61	15.00	-0.655
18	14.55	0.000
Median	14.55	0.000
335	14.34	0.306
18	14.25	0.437
Std Dev	13.86	1.000
61	13.00	2.258
31	10.45	5.972

301.30 Total Selenium		
Lab	PPM	ICP
18	1.85	-1.797
18	1.30	-1.226
Std Dev	1.08	-1.000
24	0.12	0.000
Median	0.12	0.000
335	0.01	0.114
111	0.00	0.125

301.99 Total Selenium		
Lab	PPM	Other
140	0.75	0.000
Median	0.75	0.000

301.XX Total Selenium		
Lab	PPM	Total Method
18	1.85	-1.690
18	1.30	-1.034
Std Dev	1.27	-1.000
140	0.75	-0.373
Median	0.43	0.000
24	0.12	0.373
335	0.01	0.504
111	0.00	0.516

311.99 Sodium		
Lab	%Na ₂ O	Other
24	0.28	-0.846
61	0.28	-0.846
24	0.27	-0.564
23	0.27	-0.282
Median	0.26	0.000
31	0.26	0.282
23	0.25	0.564
Std Dev	0.24	1.000
61	0.24	1.128
111	0.24	1.411

311.XX Sodium		
Lab	%Na ₂ O	Total Method
24	0.28	-0.846
61	0.28	-0.846

24	0.27	-0.564
23	0.27	-0.282
Median	0.26	0.000
31	0.26	0.282
23	0.25	0.564
Std Dev	0.24	1.000
61	0.24	1.128
111	0.24	1.411

321.00 Acid Soluble Zinc	
Lab	Atomic Absorption
219	49.58
Median	49.58

321.30 Acid Soluble Zinc		
Lab	PPM	ICP
31	91.30	-8.023
Std Dev	57.49	-1.000
18	55.30	-0.544
111	54.00	-0.274
64	53.56	-0.183
Median	52.68	0.000
18	51.80	0.183
61	48.00	0.972
Std Dev	47.87	1.000
61	47.50	1.076
24	41.50	2.323

321.99 Acid Soluble Zinc	
Lab	Other
219	41.27
Median	41.27

321.XX Acid Soluble Zinc		
Lab	PPM	Total Method
31	91.30	-8.686
Std Dev	55.37	-1.000
18	55.30	-0.986
111	54.00	-0.708
64	53.56	-0.614
18	51.80	-0.237
Median	50.69	0.000
219	49.58	0.237
61	48.00	0.575

61	47.50	0.682
Std Dev	46.01	1.000
24	41.50	1.966
219	41.27	2.016

325.10 Fluoride		
Lab	%	Electrode
23	2.03	-1.832
79	1.98	-1.086
32	1.95	-0.746
31	1.94	-0.543
32	1.91	-0.204
34	1.91	-0.136
Median	1.90	0.000
24	1.89	0.136
24	1.88	0.204
14	1.84	0.746
23	1.84	0.746
14	1.83	0.882
111	0.39	20.490

325.99 Fluoride		
Lab	%	Other
61	1.93	-1.197
61	1.89	-0.285
Median	1.87	0.000
9	1.86	0.285
9	1.77	2.452

325.XX Fluoride		
Lab	%	Total Method
23	2.03	-2.221
79	1.98	-1.378
32	1.95	-0.995
31	1.94	-0.766
61	1.93	-0.613
32	1.91	-0.383
34	1.91	-0.306
24	1.89	0.000
61	1.89	0.000
Median	1.89	0.000
24	1.88	0.077
9	1.86	0.383
14	1.84	0.689

23	1.84	0.689
14	1.83	0.842
9	1.77	1.838
111	0.39	22.971