

## AFPC

2018-07

Grade

18-46-0

## Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
<b>AMMONIACAL NITROGEN</b>					
Ammoniacal Nitrogen, MgO distillation	920.03	001.10	1	16.97	0.00
Ammoniacal Nitrogen, Other		001.99	11	16.89	0.36
Method Group 001.XX PCT			12	16.89	0.31
<b>TOTAL NITROGEN</b>					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	16.92	0.32
Total Nitrogen, Combustion	993.13	010.60	21	17.74	0.24
Total Nitrogen, Other		010.99	4	17.70	0.18
Method Group 010.XX PCT			28	17.73	0.31
<b>TOTAL PHOSPHATE</b>					
Total Phosphate, Gravimetric Quimociac		020.10	3	45.79	0.11
Total Phosphate, Spectrometric	978.02	020.20	19	45.81	0.24
Total Phosphate, ICP	970.03	020.40	3	46.15	0.22
Method Group 020.XX PCT			25	45.81	0.37
<b>INSOLUBLE PHOSPHATE</b>					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	9	0.10	0.06
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.08	0.00
Insoluble Phosphate, Automated	978.01	030.40	1	0.15	0.00
Insoluble Phosphate, Other		030.99	2	0.13	0.01
Method Group 030.XX PCT			13	0.12	0.06
<b>INDIRECT AVAILABLE PHOSPHATE</b>					
Indirect Available Phosphate, Spectrometric	960.02	040.20	10	45.64	0.10
Indirect Available Phosphate, Other		040.99	3	45.84	0.06
Method Group 040.XX PCT			13	45.74	0.19
<b>DIRECT AVAILABLE PHOSPHATE</b>					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	3	45.77	0.41
Direct Available Phosphate, Spectrometric	960.03D	041.20	2	45.65	0.22
Direct Available Phosphate, ICP		041.50	3	45.60	0.26
Direct Available Phosphate, EDTA Extract	993.01	041.60	7	45.83	0.25
Direct Available Phosphate, Other		041.99	2	46.17	0.06
Method Group 041.XX PCT			17	45.83	0.45
<b>WATER SOLUBLE PHOSPHATE</b>					
Water Soluble Phosphate, Spectrometric	970.01	048.20	13	41.04	0.04
Water Soluble Phosphate, Other		048.99	4	41.29	0.28
Method Group 048.XX PCT			17	41.04	0.19
<b>SOLUBLE POTASH AS K<sub>2</sub>O</b>					
Soluble Potash, ICP(Oxalate)		050.50	2	0.07	0.00
Soluble Potash, ICP(Citrate)		050.51	1	0.09	0.00
Soluble Potash, Other		050.99	8	0.08	0.01
Method Group 050.XX PCT			11	0.08	0.01
<b>FREE WATER</b>					
Free Water, Vacuum Oven	965.08B	060.00	14	2.40	0.20
Free Water, Other		060.99	2	2.69	0.02
Method Group 060.XX PCT			16	2.44	0.32
<b>ACID SOLUBLE CALCIUM AS CaO</b>					
Acid Soluble Calcium, Atomic Absorption	945.04	101.00	1	0.12	0.00
Acid Soluble Calcium, ICP		101.30	14	0.21	0.02
Acid Soluble Calcium, Other		101.99	1	0.13	0.00
Method Group 101.XX PCT			16	0.20	0.03
<b>ACID SOLUBLE MAGNESIUM AS MgO</b>					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	1.78	0.00
Acid Soluble Magnesium, ICP		121.30	13	1.78	0.07
Acid Soluble Magnesium, Other		121.99	2	1.66	0.07
Method Group 121.XX PCT			16	1.76	0.09
<b>SULFATE SULFUR (S)</b>					

AFPC Check Sample 07-2018	Sulfur, Gravimetric	980.02(a)	144.01	3	1.32	0.02
	Sulfur, Other		144.99	11	1.28	0.03
	Method Group 144.XX PCT			14	1.29	0.05
	<b>TOTAL SULFUR (S)</b>					
	Sulfur, Other		145.99	5	1.30	0.4
	Method Group 145.XX PCT			5	1.30	0.5
	<b>TOTAL ARSENIC</b>					
	Total Arsenic, ICP	980.02(b)	151.02	6	19.3	11.3
	Total Arsenic, Other		151.99	4	16.0	1.0
	Method Group 151.XX PPM			10	17.1	4.3
	<b>ACID SOLUBLE BORON</b>					
	Acid Soluble Boron, Other		165.99	1	5	0.0
	Method Group 165.XX PPM			1	5	0.0
	<b>TOTAL CADMIUM</b>					
	Total Cadmium, ICP		181.30	8	3.0	1.1
	Total Cadmium, Other		181.99	2	1.4	0.8
	Method Group 181.XX PPM			10	2.7	1.2
	<b>ALUMINUM AS Al<sub>2</sub>O<sub>3</sub></b>					
	ICP, %			13	1.21	0.03
	Water Soluble Chlorine, Other, %		190.99	1	1.17	0.00
	Method Group 190.XX PCT			14	1.21	0.03
	<b>TOTAL CHROMIUM</b>					
	Total Chromium, ICP		191.30	8	98	1.4
	Total Chromium, Other		191.99	2	53	31.1
	Method Group 191.XX PPM			10	97	2.9
	<b>ACID SOLUBLE COBALT</b>					
	Acid Soluble Cobalt, ICP		202.30	5	5	1.5
	Acid Soluble Cobalt, Other		202.99	2	1	0.5
	Method Group 202.XX PPM			7	3	2.5
	<b>ACID SOLUBLE COPPER</b>					
	Acid Soluble Copper, Other		221.99	1	0.9	0.0
	Method Group 221.XX PPM			4	1.0	2.0
	<b>ACID SOLUBLE IRON AS Fe<sub>2</sub>O<sub>3</sub></b>					
	Acid Soluble Iron, ICP		241.30	13	1.82	0.02
	Acid Soluble Iron, Other		241.99	2	1.77	0.03
	Method Group 241.XX PCT			16	1.82	0.05
	<b>TOTAL LEAD</b>					
	Total Lead, ICP		251.30	5	1.3	0.4
	Total Lead, Other		251.99	1	0.0	0.0
	Method Group 251.XX PPM			6	1.1	0.6
	<b>ACID SOLUBLE MANGANESE</b>					
	Acid Soluble Manganese, ICP	972.02a	261.30	3	260	97.1
	Acid Soluble Manganese, Other		261.99	7	264	14.6
	Method Group 261.XX PPM			10	262	10.4
	<b>TOTAL MERCURY</b>					
	Total Mercury, ICP		281.30	1	0.00	0.00
	Method Group 281.XX PPM			1	0.01	0.00
	<b>TOTAL MOLYBDENUM</b>					
	Total Molybdenum, ICP		289.30	5	10	1.6
	Total Molybdenum, Other		289.99	2	4	2.3
	Method Group 289.XX PPM			7	8	2.5
	<b>TOTAL NICKEL</b>					
	Total Nickel, ICP		291.30	7	17.6	1.4
	Total Nickel, icp		291.99	2	8.7	4.8
	Method Group 291.XX PPM			9	17.3	2.4
	<b>TOTAL SELENIUM</b>					
	Total Selenium, ICP		301.30	3	0.1	0.4
	Method Group 301.XX PPM			3	0.1	0.5
	<b>SODIUM AS Na<sub>2</sub>O</b>					
	Sodium, Other		311.99	9	0.16	0.02

Method Group 311.XX PCT		9	0.16	0.02
<b>ACID SOLUBLE ZINC</b>				
Acid Soluble Zinc, Atomic Absorption	975.02 321.00	1	41.3	0.0
Acid Soluble Zinc, ICP	321.30	6	64.1	43.0
Acid Soluble Zinc, Other	321.99	4	356.9	463.6
Method Group 321.XX %		11	46.8	50.0
<b>FLUORIDE</b>				
Volumetric	325.10	11	1.86	0.06
Distilled/Electrode	325.99	2	1.84	0.04
Method Group 325.XX PCT		13	1.86	0.05

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001.10 Ammoniacal Nitrogen		
Lab		MgO distillation
31	16.97	0.000
<b>Median</b>	<b>16.97</b>	<b>0.000</b>

001.99 Ammoniacal Nitrogen		
Lab		Other
335	17.93	-2.859
61	17.77	-2.419
61	17.66	-2.130
<b>Std Dev</b>	<b>17.25</b>	<b>-1.000</b>
113	16.91	-0.069
34	16.90	-0.041
113	16.89	0.000
<b>Median</b>	<b>16.89</b>	<b>0.000</b>
79	16.84	0.124
24	16.81	0.220
24	16.79	0.261
140	16.78	0.302
38	16.76	0.344

001.XX Ammoniacal Nitrogen		
Lab		Total Method
335	17.93	-4.054
61	17.77	-3.426
61	17.66	-3.014
<b>Std Dev</b>	<b>17.15</b>	<b>-1.000</b>
31	16.97	-0.304
113	16.91	-0.069
34	16.90	-0.029
<b>Median</b>	<b>16.89</b>	<b>0.000</b>
113	16.89	0.029
79	16.84	0.206
24	16.81	0.344
24	16.79	0.402
140	16.78	0.461
38	16.76	0.520

010.11 Total Nitrogen		
Lab		Modified Comprehensive
219	17.76	-2.648
<b>Std Dev</b>	<b>17.23</b>	<b>-1.000</b>
43	16.92	0.000
<b>Median</b>	<b>16.92</b>	<b>0.000</b>

43 16.91 0.032

010.60 Total Nitrogen		
Lab		Combustion
63	17.90	-0.660
80	17.90	-0.660
24	17.85	-0.433
66	17.82	-0.309
219	17.80	-0.247
49	17.80	-0.227
31	17.78	-0.165
79	17.77	-0.124
24	17.76	-0.082
64	17.76	-0.082
29	17.74	0.000
<b>Median</b>	<b>17.74</b>	<b>0.000</b>
137	17.72	0.082
47	17.63	0.474
38	17.60	0.577
77	17.59	0.618
<b>Std Dev</b>	<b>17.50</b>	<b>1.000</b>
140	17.47	1.113
14	17.45	1.196
99	17.44	1.237
14	17.42	1.340
111	17.40	1.402
103	17.25	2.041

010.99 Total Nitrogen		
Lab		Other
23	17.84	-0.782
23	17.78	-0.447
<b>Median</b>	<b>17.70</b>	<b>0.000</b>
113	17.62	0.447
<b>Std Dev</b>	<b>17.52</b>	<b>1.000</b>
113	17.36	1.898

010.XX Total Nitrogen		
Lab		Total Method
63	17.90	-0.677
80	17.90	-0.677
24	17.85	-0.458
23	17.84	-0.418
66	17.82	-0.339

219	17.80	-0.279
49	17.80	-0.259
31	17.78	-0.199
23	17.78	-0.179
79	17.77	-0.159
24	17.76	-0.120
64	17.76	-0.120
219	17.76	-0.100
29	17.74	-0.040
<b>Median</b>	<b>17.73</b>	<b>0.000</b>
137	17.72	0.040
47	17.63	0.418
113	17.62	0.458
38	17.60	0.518
77	17.59	0.558
<b>Std Dev</b>	<b>17.48</b>	<b>1.000</b>
140	17.47	1.036
14	17.45	1.116
99	17.44	1.156
14	17.42	1.255
111	17.40	1.315
113	17.36	1.494
103	17.25	1.933
43	16.92	3.248
43	16.91	3.288

020.10 Total Phosphate		
Lab		Gravimetric Quimociac
219	46.09	-2.680
<b>Std Dev</b>	<b>45.90</b>	<b>-1.000</b>
241	45.79	0.000
241	45.79	0.000
<b>Median</b>	<b>45.79</b>	<b>0.000</b>

020.20 Total Phosphate		
Lab		Spectrometric
61	46.76	-4.041
14	46.60	-3.361
111	46.13	-1.340
32	46.09	-1.191
<b>Std Dev</b>	<b>46.05</b>	<b>-1.000</b>
34	45.99	-0.766
24	45.97	-0.659
32	45.95	-0.596

113	45.86	-0.213
23	45.81	0.000
31	45.81	0.000
<b>Median</b>	<b>45.81</b>	<b>0.000</b>
24	45.75	0.277
43	45.74	0.319
79	45.73	0.362
23	45.68	0.553
43	45.65	0.702
113	45.65	0.702
14	45.59	0.936
<b>Std Dev</b>	<b>45.57</b>	<b>1.000</b>
140	45.53	1.212
99	45.42	1.680

020.40 Total Phosphate		
Lab		Automated
219	46.28	-0.603
111	46.15	0.000
<b>Median</b>	<b>46.15</b>	<b>0.000</b>
<b>Std Dev</b>	<b>45.92</b>	<b>1.000</b>
137	45.68	2.077

020.XX Total Phosphate		
Lab		Total Method
61	46.76	-3.105
14	46.60	-2.582
219	46.28	-1.536
111	46.15	-1.095
111	46.13	-1.030
<b>Std Dev</b>	<b>46.12</b>	<b>-1.000</b>
32	46.09	-0.915
219	46.09	-0.915
34	45.99	-0.588
24	45.97	-0.507
32	45.95	-0.458
113	45.86	-0.163
23	45.81	0.000
31	45.81	0.000
<b>Median</b>	<b>45.81</b>	<b>0.000</b>
241	45.79	0.065
241	45.79	0.065
24	45.75	0.212
43	45.74	0.245

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79	45.73	0.278
23	45.68	0.425
137	45.68	0.425
43	45.65	0.539
113	45.65	0.539
14	45.59	0.719
140	45.53	0.931
Std Dev	45.50	1.000
99	45.42	1.291

030.20 Insoluble Phosphate Spectrometric		
Lab		
113	0.25	-2.680
Std Dev	0.15	-1.000
61	0.15	-0.983
24	0.14	-0.804
24	0.12	-0.447
140	0.10	0.000
Median	0.10	0.000
23	0.07	0.447
23	0.07	0.536
79	0.07	0.536
113	0.05	0.893

030.30 Insoluble Phosphate Alka. Quimociac		
Lab		
31	0.08	0.000
Median	0.08	0.000

030.40 Insoluble Phosphate Automated		
Lab		
34	0.15	0.000
Median	0.15	0.000

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

030.XX Insoluble Phosphate Total Method		
Lab		

113	0.25	-2.393
Std Dev	0.17	-1.000
34	0.15	-0.574
61	0.15	-0.574
24	0.14	-0.383
32	0.14	-0.383
32	0.13	-0.096
24	0.12	0.000
Median	0.12	0.000
140	0.10	0.479
31	0.08	0.766
23	0.07	0.957
Std Dev	0.07	1.000
23	0.07	1.053
79	0.07	1.053
113	0.05	1.436

040.20 Indirect Available Phosphate Spectrometric		
Lab		
61	46.61	-9.810
24	45.83	-1.871
23	45.75	-1.062
31	45.74	-1.011
Std Dev	45.74	-1.000
79	45.66	-0.152
Median	45.64	0.000
24	45.63	0.152
113	45.62	0.253
23	45.61	0.303
113	45.60	0.405
Std Dev	45.54	1.000
140	45.43	2.124

040.99 Indirect Available Phosphate Other		
Lab		
32	45.97	-2.161
Std Dev	45.90	-1.000
34	45.84	0.000
Median	45.84	0.000
32	45.81	0.519

040.XX Indirect Available Phosphate Total Method		
Lab		
61	46.61	-5.551

32	45.97	-1.436
Std Dev	45.90	-1.000
34	45.84	-0.638
24	45.83	-0.542
32	45.81	-0.447
23	45.75	-0.032
31	45.74	0.000
Median	45.74	0.000
79	45.66	0.542
24	45.63	0.734
113	45.62	0.798
23	45.61	0.830
113	45.60	0.893
Std Dev	45.58	1.000
140	45.43	1.978

041.10 Direct Available Phosphate Gravimetric Quimociac		
Lab		
47	45.84	-0.160
219	45.77	0.000
Median	45.77	0.000
Std Dev	45.36	1.000
107	44.75	2.520

041.20 Direct Available Phosphate Spectrometric		
Lab		
38	45.94	-1.340
Std Dev	45.86	-1.000
Median	45.65	0.000
Std Dev	45.43	1.000
47	45.36	1.340

041.50 Direct Available Phosphate ICP		
Lab		
63	46.27	-2.547
Std Dev	45.86	-1.000
80	45.60	0.000
Median	45.60	0.000
66	45.57	0.133

041.60 Direct Available Phosphate EDTA Extract		
Lab		
49	47.30	-5.864
219	46.14	-1.241

77	46.09	-1.041
Std Dev	46.08	-1.000
137	45.83	0.000
Median	45.83	0.000
64	45.83	0.020
29	45.74	0.379
Std Dev	45.58	1.000
103	43.98	7.404

041.99 Direct Available Phosphate Other		
Lab		
79	46.25	-1.340
Std Dev	46.23	-1.000
Median	46.17	0.000
Std Dev	46.11	1.000
335	46.09	1.340

041.XX Direct Available Phosphate Total Method		
Lab		
49	47.30	-4.006
63	46.27	-1.203
79	46.25	-1.149
Std Dev	46.20	-1.000
219	46.14	-0.848
77	46.09	-0.711
335	46.09	-0.711
38	45.94	-0.287
47	45.84	-0.014
137	45.83	0.000
Median	45.83	0.000
64	45.83	0.014
219	45.77	0.164
29	45.74	0.259
80	45.60	0.629
66	45.57	0.725
Std Dev	45.46	1.000
47	45.36	1.299
107	44.75	2.967
103	43.98	5.059

048.20 Water Soluble Phosphate Spectrometric		
Lab		
61	41.49	-10.964
140	41.41	-9.015

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Std Dev	41.08	-1.000
14	41.08	-0.975
23	41.08	-0.975
23	41.08	-0.975
113	41.04	-0.122
14	41.04	0.000
Median	41.04	0.000
24	41.03	0.122
24	41.02	0.365
31	41.02	0.365
Std Dev	40.99	1.000
113	40.95	2.071
79	40.84	4.873
111	40.08	23.267

048.99	Water Soluble Phosphate	
Lab	Other	
32	41.36	-0.228
32	41.35	-0.211
Median	41.29	0.000
34	41.23	0.211
Std Dev	41.01	1.000
111	40.19	3.866

048.XX	Water Soluble Phosphate	
Lab	Total Method	
61	41.49	-2.840
140	41.41	-2.329
32	41.36	-2.010
32	41.35	-1.978
34	41.23	-1.212
Std Dev	41.20	-1.000
14	41.08	-0.223
23	41.08	-0.223
23	41.08	-0.223
113	41.04	0.000
Median	41.04	0.000
14	41.04	0.032
24	41.03	0.064
24	41.02	0.128
31	41.02	0.128
113	40.95	0.574
Std Dev	40.88	1.000
79	40.84	1.308

111	40.19	5.424
111	40.08	6.126

050.50	%K <sub>2</sub> O	Soluble Potash
Lab		ICP(Oxalate)
23	0.07	0.000
23	0.07	0.000
Median	0.07	0.000

050.51	%K <sub>2</sub> O	Soluble Potash
Lab		ICP(Citrate)
137	0.09	0.000
Median	0.09	0.000

050.99	Soluble Potash	
Lab	%K <sub>2</sub> O	Other
80	0.10	-3.484
111	0.10	-2.591
Std Dev	0.09	-1.000
24	0.09	-0.804
43	0.08	-0.027
Median	0.08	0.000
43	0.08	0.027
24	0.08	0.089
31	0.08	0.089
61	0.08	0.089

050.XX	Soluble Potash	
Lab	%K <sub>2</sub> O	Total Method
80	0.10	-3.511
111	0.10	-2.618
137	0.09	-1.725
Std Dev	0.09	-1.000
24	0.09	-0.831
43	0.08	-0.054
43	0.08	0.000
Median	0.08	0.000
24	0.08	0.062
31	0.08	0.062
61	0.08	0.062
Std Dev	0.07	1.000
23	0.07	1.849
23	0.07	1.849

060.00	Free Water	
Lab		Vacuum Oven
31	2.74	-1.664
24	2.61	-1.003
Std Dev	2.60	-1.000
24	2.57	-0.808
43	2.51	-0.514
111	2.46	-0.294
43	2.46	-0.269
32	2.42	-0.098
Median	2.40	0.000
34	2.38	0.098
32	2.34	0.294
140	2.22	0.881
23	2.22	0.881
Std Dev	2.20	1.000
23	1.94	2.276
79	1.86	2.643
61	1.77	3.108

060.99	Free Water	
Lab		Other
14	2.72	-1.340
Std Dev	2.71	-1.000
Median	2.69	0.000
Std Dev	2.66	1.000
14	2.66	1.340

060.XX	Free Water	
Lab		Total Method
31	2.74	-1.142
14	2.72	-1.047
Std Dev	2.70	-1.000
14	2.66	-0.821
24	2.61	-0.632
24	2.57	-0.481
43	2.51	-0.255
111	2.46	-0.085
43	2.46	-0.066
Median	2.44	0.000
32	2.42	0.066
34	2.38	0.217
32	2.34	0.368
140	2.22	0.821

23	2.22	0.821
Std Dev	2.17	1.000
23	1.94	1.897
79	1.86	2.180
61	1.77	2.538

101.00	Acid Soluble Calcium	
Lab	%CaO	Atomic Absorption
219	0.12	0.000
Median	0.12	0.000

101.30	Acid Soluble Calcium	
Lab	%CaO	ICP
32	0.24	-1.005
Std Dev	0.23	-1.000
14	0.23	-0.804
24	0.23	-0.804
32	0.23	-0.603
61	0.22	-0.402
24	0.22	-0.201
23	0.21	0.000
23	0.21	0.000
Median	0.21	0.000
43	0.19	0.671
43	0.19	0.736
34	0.19	0.804
111	0.19	0.804
Std Dev	0.19	1.000
31	0.18	1.086
14	0.17	1.809

101.99	Acid Soluble Calcium	
Lab	%CaO	Other
219	0.13	0.000
Median	0.13	0.000

101.XX	Acid Soluble Calcium	
Lab	%CaO	Total Method
32	0.24	-1.354
14	0.23	-1.151
24	0.23	-1.151
Std Dev	0.23	-1.000
32	0.23	-0.948
61	0.22	-0.745

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24	0.22	-0.542
23	0.21	-0.339
23	0.21	-0.339
<b>Median</b>	<b>0.20</b>	<b>0.000</b>
43	0.19	0.339
43	0.19	0.404
34	0.19	0.473
111	0.19	0.473
31	0.18	0.757
<b>Std Dev</b>	<b>0.18</b>	<b>1.000</b>
14	0.17	1.488
219	0.13	2.970
219	0.12	3.269

121.00	Acid Soluble Magnesium
Lab	%MgO Atomic Absorption
219	1.78 0.000
<b>Median</b>	<b>1.78 0.000</b>

121.30	Acid Soluble Magnesium
Lab	%MgO ICP
32	1.85 -0.938
32	1.84 -0.804
34	1.82 -0.603
23	1.80 -0.268
23	1.79 -0.134
24	1.78 -0.067
24	1.78 0.000
<b>Median</b>	<b>1.78 0.000</b>
61	1.75 0.335
<b>Std Dev</b>	<b>1.70 1.000</b>
14	1.70 1.005
14	1.70 1.072
31	1.66 1.608
43	1.64 1.876
43	1.63 2.010

121.99	Acid Soluble Magnesium
Lab	%MgO Other
111	1.75 -1.340
<b>Std Dev</b>	<b>1.73 -1.000</b>
<b>Median</b>	<b>1.66 0.000</b>
<b>Std Dev</b>	<b>1.59 1.000</b>
219	1.57 1.340

121.XX	Acid Soluble Magnesium
Lab	%MgO Total Method
32	1.85 -1.079
<b>Std Dev</b>	<b>1.84 -1.000</b>
32	1.84 -0.948
34	1.82 -0.752
23	1.80 -0.425
23	1.79 -0.294
219	1.78 -0.275
24	1.78 -0.229
24	1.78 -0.163
<b>Median</b>	<b>1.76 0.000</b>
61	1.75 0.163
111	1.75 0.163
14	1.70 0.817
14	1.70 0.882
<b>Std Dev</b>	<b>1.69 1.000</b>
31	1.66 1.405
43	1.64 1.667
43	1.63 1.798
219	1.57 2.497

144..01	Sulfate Sulfur (S)
Lab	Gravimetric
241	1.34 -0.975
241	1.32 0.000
<b>Median</b>	<b>1.32 0.000</b>
<b>Std Dev</b>	<b>1.29 1.000</b>
79	1.28 1.705

144.99	Sulfate Sulfur (S)
Lab	Other
23	1.32 -1.104
32	1.32 -1.104
<b>Std Dev</b>	<b>1.31 -1.000</b>
34	1.31 -0.946
14	1.30 -0.473
14	1.29 -0.315
23	1.28 0.000
<b>Median</b>	<b>1.28 0.000</b>
32	1.27 0.315
24	1.26 0.631
24	1.26 0.631

<b>Std Dev</b>	<b>1.25 1.000</b>
61	1.20 2.680
31	1.13 4.887

144.XX	Sulfate Sulfur (S)
Lab	Total Method
241	1.34 -1.307
<b>Std Dev</b>	<b>1.32 -1.000</b>
23	1.32 -0.784
32	1.32 -0.784
241	1.32 -0.784
34	1.31 -0.654
14	1.30 -0.261
14	1.29 -0.131
<b>Median</b>	<b>1.29 0.000</b>
23	1.28 0.131
79	1.28 0.131
32	1.27 0.392
24	1.26 0.654
24	1.26 0.654
<b>Std Dev</b>	<b>1.25 1.000</b>
61	1.20 2.353
31	1.13 4.183

145.99	Total Sulfur (S)
Lab	Other
111	1.33 -0.066
43	1.31 -0.027
43	1.30 0.000
<b>Median</b>	<b>1.30 0.000</b>
<b>Std Dev</b>	<b>0.92 1.000</b>
24	0.81 1.313
24	0.68 1.658

145.XX	Total Sulfur (S)
Lab	Total Method
111	1.33 -0.066
43	1.31 -0.027
43	1.30 0.000
<b>Median</b>	<b>1.30 0.000</b>
<b>Std Dev</b>	<b>0.92 1.000</b>
24	0.81 1.313
24	0.68 1.658

151.30	Total Arsenic
Lab	ICP
43	22.80 -0.307
43	22.70 -0.298
64	20.76 -0.126
<b>Median</b>	<b>19.34 0.000</b>
140	17.92 0.126
<b>Std Dev</b>	<b>8.06 1.000</b>
111	3.50 1.405
24	1.59 1.574

151.99	Total Arsenic
Lab	Other
335	19.20 -3.240
<b>Std Dev</b>	<b>17.00 -1.000</b>
31	16.30 -0.281
<b>Median</b>	<b>16.03 0.000</b>
113	15.75 0.281
113	15.60 0.434

151.XX	Total Arsenic
Lab	Total Method
43	22.80 -1.613
43	22.70 -1.584
64	20.76 -1.033
<b>Std Dev</b>	<b>20.64 -1.000</b>
335	19.20 -0.591
140	17.92 -0.230
<b>Median</b>	<b>17.11 0.000</b>
31	16.30 0.230
113	15.75 0.385
113	15.60 0.428
<b>Std Dev</b>	<b>13.58 1.000</b>
111	3.50 3.858
24	1.59 4.401

165.99	Acid Soluble Boron
Lab	PPM Other
24	5.21 0.000
<b>Median</b>	<b>5.21 0.000</b>

165.XX, ppm	Acid Soluble Boron
Lab	PPM Total Method
24	5.21 0.000

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Median	5.21	0.000
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181.30 Total Cadmium		
Lab	PPM	ICP
43	4.18	-1.091
43	4.15	-1.063
Std Dev	4.08	-1.000
64	3.57	-0.525
335	3.01	-0.001
Median	3.00	0.000
113	3.00	0.001
113	2.36	0.596
111	2.00	0.931
Std Dev	1.93	1.000
61	1.05	1.812

181.99 Total Cadmium		
Lab	PPM	Other
31	2.45	-1.340
Std Dev	2.19	-1.000
Median	1.41	0.000
Std Dev	0.63	1.000
24	0.37	1.340

181.XX Total Cadmium		
Lab	PPM	Total Method
43	4.18	-1.455
43	4.15	-1.425
Std Dev	3.72	-1.000
64	3.57	-0.845
335	3.01	-0.279
113	3.00	-0.276
Median	2.73	0.000
31	2.45	0.276
113	2.36	0.366
111	2.00	0.727
Std Dev	1.73	1.000
61	1.05	1.678
24	0.37	2.360

190.00 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	ICP
14	1.26	-1.723
14	1.25	-1.531

Std Dev	1.24	-1.000
24	1.24	-0.957
23	1.23	-0.574
34	1.22	-0.383
32	1.22	-0.191
23	1.21	0.000
24	1.21	0.000
Median	1.21	0.000
32	1.19	0.766
43	1.19	0.766
43	1.19	0.766
Std Dev	1.18	1.000
61	1.17	1.531
111	0.84	14.357

190.99 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Atomic Absorption
31	1.17	0.000
Median	1.17	0.000

190.XX Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Total Method
14	1.26	-1.787
14	1.25	-1.588
Std Dev	1.24	-1.000
24	1.24	-0.993
23	1.23	-0.596
34	1.22	-0.397
32	1.22	-0.199
23	1.21	0.000
24	1.21	0.000
Median	1.21	0.000
32	1.19	0.794
43	1.19	0.794
43	1.19	0.794
Std Dev	1.18	1.000
31	1.17	1.588
61	1.17	1.588
111	0.84	14.889

191.30 Total Chromium		
Lab	PPM	ICP
43	98.50	-0.734
64	98.23	-0.532

111	98.00	-0.367
43	97.50	0.000
61	97.50	0.000
Median	97.50	0.000
113	96.63	0.639
Std Dev	96.14	1.000
113	95.04	1.810
335	86.88	7.798

191.99 Total Chromium		
Lab	PPM	Other
31	94.50	-1.340
Std Dev	83.91	-1.000
Median	52.78	0.000
Std Dev	21.64	1.000
24	11.05	1.340

191.XX Total Chromium		
Lab	PPM	Total Method
43	98.50	-0.593
64	98.23	-0.480
111	98.00	-0.387
43	97.50	-0.180
61	97.50	-0.180
Median	97.07	0.000
113	96.63	0.180
113	95.04	0.839
Std Dev	94.65	1.000
31	94.50	1.060
335	86.88	4.211
24	11.05	35.560

202.30 Acid Soluble Cobalt		
Lab	PPM	ICP
64		

202.99 Acid Soluble Cobalt		
Lab	PPM	Other
31	1.53	-1.340
Std Dev	1.38	-1.000
Median	0.92	0.000
Std Dev	0.47	1.000
24	0.32	1.340

202.XX Acid Soluble Cobalt		
Lab	PPM	Total Method
64	5.21	-1.083
Std Dev	5.04	-1.000
43	5.00	-0.980
43	5.00	-0.980
61	3.00	0.000
111	3.00	0.000
Median	3.00	0.000
31	1.53	0.720
Std Dev	0.96	1.000
24	0.32	1.314

221.00 Acid Soluble Copper		
Lab	PPM	Atomic Absorption
219	1.78	0.000
Median	1.78	0.000

221.30 Acid Soluble Copper		
Lab	PPM	ICP
61	<0.4	0.000
111	9.00	-2.680
Std Dev	3.99	-1.000
43	1.00	0.000
43	1.00	0.000
Median	1.00	0.000

221.99 Acid Soluble Copper		
Lab	PPM	Other
24	0.15	0.000
Median	0.15	0.000

221.XX Acid Soluble Copper		
Lab	PPM	Total Method
61	<0.4	0.000
111	9.00	-4.843
Std Dev	2.65	-1.000
43	1.00	0.000
43	1.00	0.000
Median	1.00	0.000
24	0.15	0.517

241.30 Acid Soluble Iron		
Lab	%Fe <sub>2</sub> O <sub>3</sub>	ICP



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111	1.94	-5.360
23	1.87	-2.010
32	1.86	-1.563
<b>Std Dev</b>	<b>1.84</b>	<b>-1.000</b>
23	1.84	-0.893
43	1.83	-0.447
32	1.83	-0.223
24	1.82	0.000
24	1.82	0.000
34	1.82	0.000
<b>Median</b>	<b>1.82</b>	<b>0.000</b>
43	1.81	0.447
<b>Std Dev</b>	<b>1.80</b>	<b>1.000</b>
14	1.77	2.233
14	1.76	2.680
61	1.69	5.807

241.99 Lab	%Fe <sub>2</sub> O <sub>3</sub>	Acid Soluble Iron Other
219	1.82	-1.340
<b>Std Dev</b>	<b>1.80</b>	<b>-1.000</b>
<b>Median</b>	<b>1.77</b>	<b>0.000</b>
<b>Std Dev</b>	<b>1.74</b>	<b>1.000</b>
31	1.73	1.340

241.XX Lab	%Fe <sub>2</sub> O <sub>3</sub>	Acid Soluble Iron Total Method
111	1.94	-2.809
23	1.87	-1.053
<b>Std Dev</b>	<b>1.86</b>	<b>-1.000</b>
32	1.86	-0.819
23	1.84	-0.468
43	1.83	-0.234
32	1.83	-0.117
24	1.82	0.000
24	1.82	0.000
34	1.82	0.000
<b>Median</b>	<b>1.82</b>	<b>0.000</b>
219	1.82	0.094
43	1.81	0.234
<b>Std Dev</b>	<b>1.78</b>	<b>1.000</b>
219	1.78	1.006
14	1.77	1.170
14	1.76	1.404

31	1.73	2.224
61	1.69	3.043

251.30 Lab	PPM	Total Lead ICP
61	<1.8	0.000
113	1.73	-0.950
43	1.50	-0.447
43	1.30	0.000
<b>Median</b>	<b>1.30</b>	<b>0.000</b>
335	0.90	0.893
<b>Std Dev</b>	<b>0.85</b>	<b>1.000</b>
113	0.81	1.106

251.99 Lab	PPM	Total Lead Other
24	0.03	0.000
<b>Median</b>	<b>0.03</b>	<b>0.000</b>

251.XX Lab	PPM	Total Lead Total Method
61	<1.8	0.000
113	1.73	-1.349
<b>Std Dev</b>	<b>1.56</b>	<b>-1.000</b>
43	1.50	-0.863
43	1.30	-0.431
<b>Median</b>	<b>1.10</b>	<b>0.000</b>
335	0.90	0.431
113	0.81	0.636
<b>Std Dev</b>	<b>0.64</b>	<b>1.000</b>
24	0.03	2.310

261.30 Lab	PPM	Acid Soluble Manganese ICP
113	263.00	-0.027
113	260.40	0.000
<b>Median</b>	<b>260.40</b>	<b>0.000</b>
<b>Std Dev</b>	<b>163.27</b>	<b>1.000</b>
111	2.70	2.653

261.99 Lab	PPM	Acid Soluble Manganese Other
43	286.50	-1.556
43	284.50	-1.419

<b>Std Dev</b>	<b>278.39</b>	<b>-1.000</b>
31	269.95	-0.422
219	263.80	0.000
<b>Median</b>	<b>263.80</b>	<b>0.000</b>
61	259.00	0.329
219	256.35	0.511
<b>Std Dev</b>	<b>249.21</b>	<b>1.000</b>
24	28.35	16.138

261.XX Lab	PPM	Acid Soluble Manganese Total Method
43	286.50	-2.915
43	284.50	-2.680
<b>Std Dev</b>	<b>270.21</b>	<b>-1.000</b>
31	269.95	-0.970
219	263.80	-0.247
113	263.00	-0.153
<b>Median</b>	<b>261.70</b>	<b>0.000</b>
113	260.40	0.153
61	259.00	0.317
219	256.35	0.629
<b>Std Dev</b>	<b>253.19</b>	<b>1.000</b>
24	28.35	27.429
111	2.70	30.444

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

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

289.30 Lab	PPM	Total Molybdenum ICP
64		

289.99 Lab	PPM	Total Molybdenum Other
31	7.55	-1.340
<b>Std Dev</b>	<b>6.77</b>	<b>-1.000</b>

<b>Median</b>	<b>4.46</b>	<b>0.000</b>
<b>Std Dev</b>	<b>2.15</b>	<b>1.000</b>
24	1.37	1.340

289.XX Lab	PPM	Total Molybdenum Total Method
64	10.36	-1.127
43	10.15	-1.029
<b>Std Dev</b>	<b>10.09</b>	<b>-1.000</b>
43	10.00	-0.957
111	8.00	0.000
<b>Median</b>	<b>8.00</b>	<b>0.000</b>
31	7.55	0.215
61	7.00	0.479
<b>Std Dev</b>	<b>5.91</b>	<b>1.000</b>
24	1.37	3.175

291.30 Lab	PPM	Total Nickel ICP
43		

291.99 Lab	PPM	Total Nickel Other
31	15.15	-1.340
<b>Std Dev</b>	<b>13.51</b>	<b>-1.000</b>
<b>Median</b>	<b>8.67</b>	<b>0.000</b>
<b>Std Dev</b>	<b>3.84</b>	<b>1.000</b>
24	2.20	1.340

291.XX Lab	PPM	Total Nickel Total Method
43	19.00	-0.866
43	19.00	-0.866
64	18.10	-0.417
113	17.58	-0.155
113	17.27	0.000
<b>Median</b>	<b>17.27</b>	<b>0.000</b>
61	16.00	0.631
335	15.42	0.923
<b>Std Dev</b>	<b>15.26</b>	<b>1.000</b>
31	15.15	1.056
24	2.20	7.521

301.30 Lab	PPM	Total Selenium ICP
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140	1.02	-2.529
Std Dev	0.44	-1.000
24	0.07	0.000
Median	0.07	0.000
335	0.01	0.151

301.XX		Total Selenium
Lab	PPM	Total Mthod
140	1.02	-2.529
Std Dev	0.44	-1.000
24	0.07	0.000
Median	0.07	0.000
335	0.01	0.151

311.99		Sodium
Lab	%Na <sub>2</sub> O	Other
31	0.18	-1.072
Std Dev	0.17	-1.000
111	0.17	-0.804
23	0.17	-0.536
23	0.17	-0.536
24	0.16	0.000
Median	0.16	0.000
24	0.15	0.268
61	0.14	0.804
Std Dev	0.14	1.000
43	0.13	1.187
43	0.13	1.242

311.XX		Sodium
Lab	%Na <sub>2</sub> O	Total Method
31	0.18	-1.072
Std Dev	0.17	-1.000
111	0.17	-0.804
23	0.17	-0.536
23	0.17	-0.536
24	0.16	0.000
Median	0.16	0.000
24	0.15	0.268
61	0.14	0.804
Std Dev	0.14	1.000
43	0.13	1.187
43	0.13	1.242

321.00			Acid Soluble Zinc
Lab			Atomic Absorption
219	41.33		0.000
Median	41.33		0.000

321.30			Acid Soluble Zinc
Lab	PPM		ICP
113	94.38		-0.703
111	93.00		-0.671
113	92.24		-0.654
Median	64.12		0.000
61	36.00		0.654
64	34.90		0.679
Std Dev	21.10		1.000
24	4.16		1.394

321.99			Acid Soluble Zinc
Lab			Other
43	669.50		-0.674
43	667.00		-0.669
Median	356.90		0.000
31	46.80		0.669
219	45.39		0.672

321.XX			Acid Soluble Zinc
Lab	PPM		Total Method
43	669.50		-15.164
43	667.00		-15.103
113	94.38		-1.159
111	93.00		-1.125
113	92.24		-1.106
Std Dev	87.86		-1.000
31	46.80		0.000
Median	46.80		0.000
219	45.39		0.034
219	41.33		0.133
61	36.00		0.263
64	34.90		0.290
Std Dev	5.74		1.000
24	4.16		1.038

325.10			Fluoride
Lab	%		Electrode
32	1.99		-2.233

79	1.96	-1.697
32	1.94	-1.340
24	1.89	-0.447
34	1.87	-0.179
24	1.86	0.000
Median	1.86	0.000
14	1.85	0.179
14	1.84	0.357
23	1.83	0.536
23	1.83	0.625
111	1.72	2.591

325.99		Fluoride
Lab	%	Other
31	1.89	-1.340
Median	1.84	0.000
61	1.78	1.340

325.XX		Fluoride
Lab	%	Total Method
32	1.99	-2.792
79	1.96	-2.122
32	1.94	-1.675
31	1.89	-0.670
24	1.89	-0.558
34	1.87	-0.223
24	1.86	0.000
Median	1.86	0.000
14	1.85	0.223
14	1.84	0.447
23	1.83	0.670
23	1.83	0.782
61	1.78	1.787
111	1.72	3.238