

## AFPC

2017-05

Grade

18-46-0

## Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
<b>AMMONIACAL NITROGEN</b>					
Ammoniacal Nitrogen, Other		001.99	11	18.23	0.10
Method Group 001.XX PCT			11	18.23	0.12
<b>TOTAL NITROGEN</b>					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	18.37	0.02
Total Nitrogen, Salicylic	955.04d	010.12	1	18.38	0.00
Total Nitrogen, Combustion	993.13	010.60	23	18.33	0.22
Total Nitrogen, Other		010.99	5	18.48	0.02
Method Group 010.XX PCT			32	18.37	0.21
<b>TOTAL PHOSPHATE</b>					
Total Phosphate, Gravimetric Quimociac		020.10	1	47.67	0.00
Total Phosphate, Spectrometric	978.02	020.20	20	47.28	0.37
Total Phosphate, ICP	970.03	020.40	4	47.30	0.20
Total Phosphate, ICP, Lithium	970.02	020.50	1	47.32	0.00
Method Group 020.XX PCT			26	47.30	0.40
<b>INSOLUBLE PHOSPHATE</b>					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	8	0.05	0.03
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.09	0.00
Insoluble Phosphate, Automated	978.01	030.40	3	0.06	0.01
Insoluble Phosphate, Other		030.99	2	0.06	0.01
Method Group 030.XX PCT			14	0.06	0.03
<b>INDIRECT AVAILABLE PHOSPHATE</b>					
Indirect Available Phosphate, Spectrometric	960.02	040.20	10	47.19	0.22
Indirect Available Phosphate, Automated	960.02	040.40	1	47.34	0.00
Indirect Available Phosphate, Other		040.99	1	47.42	0.00
Method Group 040.XX PCT			12	47.24	0.30
<b>DIRECT AVAILABLE PHOSPHATE</b>					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	2	47.46	0.07
Direct Available Phosphate, Spectrometric	960.03D	041.20	2	46.58	1.21
Direct Available Phosphate, Automated	978.01	041.40	1	47.68	0.00
Direct Available Phosphate, ICP		041.50	3	46.27	0.18
Direct Available Phosphate, EDTA Extract	993.01	041.60	4	47.15	0.52
Method Group 041.XX PCT			12	47.15	1.21
<b>WATER SOLUBLE PHOSPHATE</b>					
Water Soluble Phosphate, Spectrometric	970.01	048.20	13	43.46	0.38
Water Soluble Phosphate, Other		048.99	6	44.00	0.26
Method Group 048.XX PCT			19	43.62	0.58
<b>SOLUBLE POTASH AS K<sub>2</sub>O</b>					
Soluble Potash, ICP(Oxalate)		050.50	2	0.13	0.00
Soluble Potash, ICP(Citrate)		050.51	1	0.15	0.00
Soluble Potash, Other		050.99	7	0.14	0.01
Method Group 050.XX PCT			10	0.14	0.02
<b>FREE WATER</b>					
Free Water, Vacuum Oven	965.08B	060.00	17	1.16	0.09
Free Water, Other		060.99	2	1.11	0.02
Method Group 060.XX PCT			19	1.15	0.10
<b>ACID SOLUBLE CALCIUM AS CaO</b>					
Acid Soluble Calcium, Atomic Absorption	945.04	101.00	1	0.26	0.00
Acid Soluble Calcium, ICP		101.30	17	0.44	0.04
Acid Soluble Calcium, Other		101.99	1	0.46	0.00
Method Group 101.XX PCT			19	0.44	0.05
<b>ACID SOLUBLE MAGNESIUM AS MgO</b>					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	0.57	0.00
Acid Soluble Magnesium, ICP		121.30	16	0.77	0.02
Acid Soluble Magnesium, Other		121.99	2	0.60	0.07
Method Group 121.XX PCT			19	0.77	0.05
<b>SULFATE SULFUR (S)</b>					

Sulfur, Gravimetric	980.02(a)	144.01	2	5.48	3.22
Sulfur, Other		144.99	12	1.16	0.01
Method Group 144.XX PCT			14	1.16	0.02
<b>TOTAL SULFUR (S)</b>					
Sulfur, Other		145.99	3	1.16	0.0
Method Group 145.XX PCT			3	1.16	0.0
<b>TOTAL ARSENIC</b>					
Total Arsenic, ICP	980.02(b)	151.02	6	12.1	2.1
Total Arsenic, Other		151.99	3	9.2	1.3
Method Group 151.XX PPM			9	11.8	1.7
<b>ACID SOLUBLE BORON</b>					
Acid Soluble Boron, Other		165.99	1	0	0.0
Method Group 165.XX PPM			1	0	0.0
<b>TOTAL CADMIUM</b>					
Total Cadmium, ICP		181.30	8	4.7	0.8
Total Cadmium, Other		181.99	2	5.0	0.4
Method Group 181.XX PPM			10	4.7	0.9
<b>ALUMINUM AS Al<sub>2</sub>O<sub>3</sub></b>					
ICP, %			16	1.41	0.04
Water Soluble Chlorine, Other, %		190.99	1	1.36	0.00
Method Group 190.XX PCT			17	1.41	0.07
<b>TOTAL CHROMIUM</b>					
Total Chromium, ICP		191.30	9	70	3.0
Total Chromium, Other		191.99	1	69	0.0
Method Group 191.XX PPM			10	70	3.2
<b>ACID SOLUBLE COBALT</b>					
Acid Soluble Cobalt, ICP		202.30	9	4	0.9
Acid Soluble Cobalt, Other		202.99	1	4	0.0
Method Group 202.XX PPM			10	4	0.9
<b>ACID SOLUBLE COPPER</b>					
Acid Soluble Copper, Other		221.99	1	0.9	0.0
Method Group 221.XX PPM			6	2.5	2.2
<b>ACID SOLUBLE IRON AS Fe<sub>2</sub>O<sub>3</sub></b>					
Acid Soluble Iron, ICP		241.30	17	1.60	0.02
Acid Soluble Iron, Other		241.99	1	1.60	0.00
Method Group 241.XX PCT			19	1.60	0.03
<b>TOTAL LEAD</b>					
Total Lead, ICP		251.30	6	2	1.9
Total Lead, Other		251.99	1	1.2	0.0
Method Group 251.XX PPM			7	2	2.0
<b>ACID SOLUBLE MANGANESE</b>					
Acid Soluble Manganese, ICP	972.02a	261.30	2	325	19.9
Acid Soluble Manganese, Other		261.99	9	351	11.9
Method Group 261.XX PPM			11	351	13.2
<b>TOTAL MOLYBDENUM</b>					
Total Molybdenum, ICP		289.30	9	13	0.9
Total Molybdenum, Other		289.99	1	13	0.0
Method Group 289.XX PPM			10	13	0.9
<b>TOTAL NICKEL</b>					
Total Nickel, ICP		291.30	8	18.9	0.5
Total Nickel, icp		291.99	1	18.9	0.0
Method Group 291.XX PPM			9	18.9	0.5
<b>TOTAL SELENIUM</b>					
Total Selenium, ICP		301.30	3	2.3	0.8
Total Selenium, Other		301.99	1	1	0.0
Method Group 301.XX PPM			4	1.6	1.5
<b>SODIUM AS Na<sub>2</sub>O</b>					
Sodium, Other		311.99	10	0.19	0.02
Method Group 311.XX PCT			10	0.19	0.02
<b>ACID SOLUBLE ZINC</b>					
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	1	73.0	0.0
Acid Soluble Zinc, ICP		321.30	8	73.8	15.5

Acid Soluble Zinc, Other	321.99	3	72.5	1.7
Method Group 321.XX %		12	73.0	5.9
<b>FLUORIDE</b>				
Volumetric	325.10	13	2.33	0.08
Distilled/Electrode	325.99	2	2.38	0.01
Method Group 325.XX PCT		15	2.37	0.10

001.99 Ammoniacal Nitrogen		
Lab		Other
24	18.37	-1.392
24	18.36	-1.340
61	18.33	-1.031
<b>Std Dev</b>	<b>18.33</b>	<b>-1.000</b>
310	18.30	-0.722
34	18.28	-0.515
32	18.23	0.000
<b>Median</b>	<b>18.23</b>	<b>0.000</b>
32	18.21	0.258
140	18.20	0.309
61	18.17	0.618
<b>Std Dev</b>	<b>18.13</b>	<b>1.000</b>
79	17.98	2.623
38	17.92	3.195

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61	18.33	-1.031
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310	18.30	-0.722
34	18.28	-0.515
32	18.23	0.000
<b>Median</b>	<b>18.23</b>	<b>0.000</b>
32	18.21	0.258
140	18.20	0.309
61	18.17	0.618
<b>Std Dev</b>	<b>18.13</b>	<b>1.000</b>
79	17.98	2.623
38	17.92	3.195

010.11 Total Nitrogen		
Lab		Modified Comprehensive
219	18.42	-2.680
<b>Std Dev</b>	<b>18.39</b>	<b>-1.000</b>
43	18.37	0.000
43	18.37	0.000
<b>Median</b>	<b>18.37</b>	<b>0.000</b>

010.12 Total Nitrogen		
Lab		Salicylic

107	18.38	0.000
<b>Median</b>	<b>18.38</b>	<b>0.000</b>

010.60 Total Nitrogen		
Lab		Combustion
111	18.81	-2.212
66	18.70	-1.728
24	18.70	-1.728
24	18.68	-1.636
49	18.62	-1.337
47	18.58	-1.152
<b>Std Dev</b>	<b>18.54</b>	<b>-1.000</b>
39	18.42	-0.419
137	18.39	-0.300
9	18.38	-0.253
29	18.37	-0.207
64	18.35	-0.092
9	18.33	0.000
<b>Median</b>	<b>18.33</b>	<b>0.000</b>
110	18.32	0.046
219	18.27	0.253
14	18.25	0.346
77	18.25	0.346
79	18.21	0.509
14	18.20	0.599
99	18.14	0.876
<b>Std Dev</b>	<b>18.11</b>	<b>1.000</b>
103	18.11	1.014
63	18.09	1.083
38	18.07	1.175
31	17.76	2.604

010.99 Total Nitrogen		
Lab		Other
32	18.52	-1.787
<b>Std Dev</b>	<b>18.50</b>	<b>-1.000</b>
23	18.49	-0.223
23	18.48	0.000
<b>Median</b>	<b>18.48</b>	<b>0.000</b>
<b>Std Dev</b>	<b>18.46</b>	<b>1.000</b>
32	18.46	1.117
140	18.27	9.603

010.XX Total Nitrogen		
Lab		Total Method
111	18.81	-2.535
66	18.70	-1.927
24	18.70	-1.927
24	18.68	-1.811
49	18.62	-1.434
47	18.58	-1.202
<b>Std Dev</b>	<b>18.54</b>	<b>-1.000</b>
32	18.52	-0.884
23	18.49	-0.681
23	18.48	-0.652
32	18.46	-0.507
219	18.42	-0.304
39	18.42	-0.281
137	18.39	-0.130
9	18.38	-0.072
107	18.38	-0.043
29	18.37	-0.014
<b>Median</b>	<b>18.37</b>	<b>0.000</b>
43	18.37	0.014
43	18.37	0.014
64	18.35	0.130
9	18.33	0.246
110	18.32	0.304
219	18.27	0.565
140	18.27	0.594
14	18.25	0.681
77	18.25	0.681
79	18.21	0.887
14	18.20	1.000
<b>Std Dev</b>	<b>18.19</b>	<b>1.000</b>
99	18.14	1.347
103	18.11	1.521
63	18.09	1.608
38	18.07	1.724
31	17.76	3.520

43	18.37	0.014
43	18.37	0.014
64	18.35	0.130
9	18.33	0.246
110	18.32	0.304
219	18.27	0.565
140	18.27	0.594
14	18.25	0.681
77	18.25	0.681
79	18.21	0.887
14	18.20	1.000
<b>Std Dev</b>	<b>18.19</b>	<b>1.000</b>
99	18.14	1.347
103	18.11	1.521
63	18.09	1.608
38	18.07	1.724
31	17.76	3.520

020.10 Total Phosphate		
Lab		Gravimetric Quimociac
219	47.67	0.000
<b>Median</b>	<b>47.67</b>	<b>0.000</b>

020.20 Total Phosphate		
Lab		Spectrometric
111	47.81	-1.424
<b>Std Dev</b>	<b>47.65</b>	<b>-1.000</b>
99	47.50	-0.591
34	47.48	-0.524
24	47.42	-0.376
32	47.42	-0.376
79	47.38	-0.273
32	47.38	-0.269
23	47.35	-0.175
24	47.35	-0.175
43	47.28	0.000
43	47.28	0.000
<b>Median</b>	<b>47.28</b>	<b>0.000</b>
23	47.21	0.188
61	47.09	0.511
140	47.07	0.564
<b>Std Dev</b>	<b>46.91</b>	<b>1.000</b>
310	46.90	1.021
61	46.87	1.102
14	46.53	2.029
14	46.51	2.069
31	46.07	3.265
38	45.82	3.924

020.40 Total Phosphate		
Lab		Automated
9	47.39	-0.436
219	47.36	-0.287
<b>Median</b>	<b>47.30</b>	<b>0.000</b>
9	47.25	0.287
<b>Std Dev</b>	<b>47.10</b>	<b>1.000</b>
137	46.66	3.204

020.50 Total Phosphate		
Lab		ICP
111	47.32	0.000
<b>Median</b>	<b>47.32</b>	<b>0.000</b>

020.XX Total Phosphate		
Lab		Total Method
111	47.81	-1.542
219	47.67	-1.121

Std Dev	47.63	-1.000
99	47.50	-0.609
34	47.48	-0.534
24	47.42	-0.369
32	47.42	-0.369
9	47.39	-0.278
79	47.38	-0.253
32	47.38	-0.248
219	47.36	-0.188
23	47.35	-0.143
24	47.35	-0.143
111	47.32	-0.053
Median	47.30	0.000
43	47.28	0.053
43	47.28	0.053
9	47.25	0.158
23	47.21	0.263
61	47.09	0.624
140	47.07	0.684
Std Dev	46.97	1.000
310	46.90	1.196
61	46.87	1.286
137	46.66	1.918
14	46.53	2.324
14	46.51	2.369
31	46.07	3.708
38	45.82	4.445

030.20	Insoluble Phosphate	
Lab	Spectrometric	
61	0.08	-1.181
61	0.08	-1.181
Std Dev	0.08	-1.000
24	0.07	-0.784
140	0.06	-0.387
Median	0.05	0.000
79	0.04	0.387
24	0.04	0.407
23	0.04	0.605
23	0.03	0.804

030.30	Insoluble Phosphate	
Lab	Alka. Quimociac	
31	0.09	0.000

Median	0.09	0.000
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030.40	Insoluble Phosphate	
Lab	Automated	
9	0.06	-0.670
34	0.06	0.000
Median	0.06	0.000
Std Dev	0.05	1.000
9	0.04	2.010

030.99	Insoluble Phosphate	
Lab	Other	
32	0.07	-1.340
Std Dev	0.07	-1.000
Median	0.06	0.000
Std Dev	0.04	1.000
32	0.04	1.340

030.XX	Insoluble Phosphate	
Lab	Total Method	
31	0.09	-1.452
61	0.08	-1.005
61	0.08	-1.005
Std Dev	0.08	-1.000
24	0.07	-0.558
32	0.07	-0.558
9	0.06	-0.112
140	0.06	-0.112
Median	0.06	0.000
34	0.06	0.112
79	0.04	0.759
9	0.04	0.782
24	0.04	0.782
32	0.04	0.782
Std Dev	0.04	1.000
23	0.04	1.005
23	0.03	1.228

040.20	Indirect Available Phosphate	
Lab	Spectrometric	
24	47.38	-0.863
79	47.34	-0.684
23	47.32	-0.568
24	47.28	-0.386

9	47.21	-0.068
Median	47.19	0.000
23	47.18	0.068
61	47.01	0.818
140	47.01	0.818
Std Dev	46.97	1.000
61	46.79	1.817
31	45.97	5.542

040.40	Indirect Available Phosphate	
Lab	Automated	
9	47.34	0.000
Median	47.34	0.000

040.99	Indirect Available Phosphate	
Lab	Other	
34	47.42	0.000
Median	47.42	0.000

040.XX	Indirect Available Phosphate	
Lab	Total Method	
34	47.42	-0.739
24	47.38	-0.575
79	47.34	-0.413
9	47.34	-0.390
23	47.32	-0.308
24	47.28	-0.144
Median	47.24	0.000
9	47.21	0.144
23	47.18	0.267
61	47.01	0.944
140	47.01	0.944
Std Dev	47.00	1.000
61	46.79	1.848
31	45.97	5.214

041.10	Direct Available Phosphate	
Lab	Gravimetric Quimociac	
219	47.56	-1.340
Std Dev	47.54	-1.000
Median	47.46	0.000
Std Dev	47.39	1.000
47	47.37	1.340

041.20	Direct Available Phosphate	
Lab	Spectrometric	
47	48.20	-1.340
Std Dev	47.79	-1.000
Median	46.58	0.000
Std Dev	45.37	1.000
38	44.96	1.340

041.40	Direct Available Phosphate	
Lab	Automated	
49	47.68	0.000
Median	47.68	0.000

041.50	Direct Available Phosphate	
Lab	ICP	
66	46.70	-2.429
Std Dev	46.44	-1.000
77	46.27	0.000
Median	46.27	0.000
63	46.22	0.251

041.60	Direct Available Phosphate	
Lab	EDTA Extract	
29	48.74	-3.066
Std Dev	47.67	-1.000
219	47.17	-0.043
Median	47.15	0.000
64	47.13	0.043
Std Dev	46.63	1.000
137	46.10	2.033

041.XX	Direct Available Phosphate	
Lab	Total Method	
29	48.74	-1.593
47	48.20	-1.056
Std Dev	48.14	-1.000
49	47.68	-0.529
219	47.56	-0.414
47	47.37	-0.218
219	47.17	-0.023
Median	47.15	0.000
64	47.13	0.023
66	46.70	0.449
77	46.27	0.886

63	46.22	0.931
Std Dev	46.15	1.000
137	46.10	1.056
38	44.96	2.196

048.20 Water Soluble Phosphate		
Lab	Spectrometric	
9	44.09	-1.654
24	43.86	-1.042
Std Dev	43.84	-1.000
24	43.81	-0.912
23	43.72	-0.690
23	43.62	-0.430
14	43.58	-0.326
111	43.46	0.000
Median	43.46	0.000
14	43.38	0.195
61	43.27	0.495
79	43.21	0.650
61	43.15	0.794
140	43.09	0.951
Std Dev	43.07	1.000
31	41.26	5.730

048.99 Water Soluble Phosphate		
Lab	Other	
39	47.50	-13.410
Std Dev	44.26	-1.000
9	44.11	-0.431
32	44.05	-0.182
Median	44.00	0.000
32	43.95	0.182
Std Dev	43.74	1.000
34	43.68	1.235
111	43.26	2.843

048.XX Water Soluble Phosphate		
Lab	Total Method	
39	47.50	-8.092
9	44.11	-1.022
Std Dev	44.10	-1.000
9	44.09	-0.980
32	44.05	-0.886
32	43.95	-0.688

24	43.86	-0.490
24	43.81	-0.386
23	43.72	-0.209
34	43.68	-0.115
23	43.62	0.000
Median	43.62	0.000
14	43.58	0.083
111	43.46	0.344
14	43.38	0.501
61	43.27	0.740
111	43.26	0.761
79	43.21	0.864
61	43.15	0.980
Std Dev	43.14	1.000
140	43.09	1.105
31	41.26	4.932

050.50 %K <sub>2</sub> O Soluble Potash		
Lab	ICP(Oxalate)	
23	0.13	0.000
23	0.13	0.000
Median	0.13	0.000

050.51 %K <sub>2</sub> O Soluble Potash		
Lab	ICP(Citrate)	
137	0.15	0.000
Median	0.15	0.000

050.99 %K <sub>2</sub> O Soluble Potash		
Lab	Other	
111	0.15	-0.802
61	0.15	-0.802
61	0.15	-0.401
24	0.14	0.000
Median	0.14	0.000
43	0.13	0.674
24	0.13	0.802
43	0.13	0.853

050.XX %K <sub>2</sub> O Soluble Potash		
Lab	Total Method	
111	0.15	-1.015
61	0.15	-1.015
137	0.15	-1.015

Std Dev	0.15	-1.000
61	0.15	-0.657
24	0.14	-0.300
Median	0.14	0.000
43	0.13	0.300
23	0.13	0.415
23	0.13	0.415
24	0.13	0.415
43	0.13	0.459

060.00 Free Water		
Lab	Vacuum Oven	
31	2.40	-13.791
32	1.33	-1.898
Std Dev	1.25	-1.000
140	1.23	-0.782
43	1.22	-0.670
32	1.20	-0.391
61	1.19	-0.279
24	1.18	-0.167
24	1.18	-0.167
34	1.16	0.000
Median	1.16	0.000
9	1.15	0.168
9	1.12	0.447
79	1.12	0.458
43	1.08	0.949
Std Dev	1.07	1.000
111	1.07	1.005
23	1.05	1.284
23	1.03	1.508
61	0.94	2.513

060.99 Free Water		
Lab	Other	
14	1.14	-1.340
Std Dev	1.13	-1.000
Median	1.11	0.000
Std Dev	1.08	1.000
14	1.08	1.340

060.XX Free Water		
Lab	Total Method	
31	2.40	-14.565

32	1.33	-2.156
Std Dev	1.23	-1.000
140	1.23	-0.990
43	1.22	-0.874
32	1.20	-0.583
61	1.19	-0.466
24	1.18	-0.350
24	1.18	-0.350
34	1.16	-0.175
9	1.15	0.000
Median	1.15	0.000
14	1.14	0.117
9	1.12	0.291
79	1.12	0.303
14	1.08	0.816
43	1.08	0.816
111	1.07	0.874
Std Dev	1.06	1.000
23	1.05	1.165
23	1.03	1.398
61	0.94	2.447

101.00 Acid Soluble Calcium		
Lab	%CaO	Atomic Absorption
219	0.26	0.000
Median	0.26	0.000

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
14	0.51	-1.797
111	0.48	-1.106
Std Dev	0.48	-1.000
32	0.47	-0.691
61	0.47	-0.691
23	0.46	-0.415
32	0.45	-0.138
34	0.45	-0.138
9	0.44	0.000
61	0.44	0.000
Median	0.44	0.000
23	0.43	0.277
24	0.43	0.415
9	0.42	0.691
43	0.41	0.925

43	0.41	0.960
Std Dev	0.40	1.000
24	0.38	1.659
31	0.32	3.277
14	0.30	3.871

101.99	Acid Soluble Calcium	
Lab	%CaO	Other
219	0.46	0.000
Median	0.46	0.000

101.XX	Acid Soluble Calcium	
Lab	%CaO	Total Method
14	0.51	-1.618
Std Dev	0.48	-1.000

111	0.48	-0.996
32	0.47	-0.622
61	0.47	-0.622
219	0.46	-0.610
23	0.46	-0.373
32	0.45	-0.124
34	0.45	-0.124
9	0.44	0.000
61	0.44	0.000
Median	0.44	0.000

23	0.43	0.249
24	0.43	0.373
9	0.42	0.622
43	0.41	0.833
43	0.41	0.864
Std Dev	0.40	1.000
24	0.38	1.493
31	0.32	2.949
14	0.30	3.484
219	0.26	4.604

121.00	Acid Soluble Magnesium	
Lab	%MgO	Atomic Absorption
219	0.57	0.000
Median	0.57	0.000

121.30	Acid Soluble Magnesium	
Lab	%MgO	ICP
31	1.49	-36.882

32	0.81	-1.914
34	0.79	-1.149
Std Dev	0.79	-1.000
24	0.78	-0.638
61	0.78	-0.638
24	0.78	-0.383
9	0.77	-0.128
23	0.77	-0.128
Median	0.77	0.000

23	0.77	0.128
32	0.77	0.128
61	0.77	0.128
9	0.76	0.638
14	0.75	0.893
Std Dev	0.75	1.000
14	0.74	1.659
43	0.60	8.550
43	0.59	9.316

121.99	Acid Soluble Magnesium	
Lab	%MgO	Other
111	0.70	-1.340
Std Dev	0.67	-1.000
Median	0.60	0.000
Std Dev	0.52	1.000
219	0.50	1.340

121.XX	Acid Soluble Magnesium	
Lab	%MgO	Total Method
31	1.49	-16.192
Std Dev	0.81	-1.000

32	0.81	-0.893
34	0.79	-0.558
24	0.78	-0.335
61	0.78	-0.335
24	0.78	-0.223
9	0.77	-0.112
23	0.77	-0.112
23	0.77	0.000
32	0.77	0.000
61	0.77	0.000
Median	0.77	0.000
9	0.76	0.223
14	0.75	0.335

14	0.74	0.670
Std Dev	0.72	1.000
111	0.70	1.452
43	0.60	3.685
43	0.59	4.020
219	0.57	4.433
219	0.50	5.930

144..01	Sulfate Sulfur (S)	
Lab	Gravimetric	
47	9.80	-1.340
Std Dev	8.70	-1.000
Median	5.48	0.000
Std Dev	2.26	1.000
79	1.16	1.340

144.99	Sulfate Sulfur (S)	
Lab	Other	
34	1.21	-2.848
31	1.20	-2.177
Std Dev	1.18	-1.000
9	1.17	-0.502
23	1.17	-0.502
24	1.17	-0.502
23	1.17	-0.167
Median	1.16	0.000

9	1.16	0.168
61	1.16	0.168
14	1.15	0.838
14	1.15	0.838
24	1.15	0.838
Std Dev	1.15	1.000
61	1.13	2.178

144.XX	Sulfate Sulfur (S)	
Lab	Total Method	
47	9.80	-661.330
34	1.21	-3.199
31	1.20	-2.433
Std Dev	1.18	-1.000
9	1.17	-0.519
23	1.17	-0.519
24	1.17	-0.519
23	1.17	-0.136

Median	1.16	0.000
79	1.16	0.136
9	1.16	0.247
61	1.16	0.247
Std Dev	1.15	1.000
14	1.15	1.013
14	1.15	1.013
24	1.15	1.013
61	1.13	2.544

145.99	Total Sulfur (S)	
Lab	Other	
43	1.17	-0.244
43	1.16	0.000
Median	1.16	0.000
Std Dev	1.14	1.000
111	1.11	2.436

145.XX	Total Sulfur (S)	
Lab	Total Method	
43	1.17	-0.244
43	1.16	0.000
Median	1.16	0.000
Std Dev	1.14	1.000
111	1.11	2.436

151.30	Total Arsenic	
Lab	ICP	
43	15.50	-1.649
43	15.35	-1.576
Std Dev	14.17	-1.000
64	12.22	-0.054
Median	12.11	0.000
61	12.00	0.054
31	11.75	0.175
24	10.30	0.880

151.99	Total Arsenic	
Lab	Other	
140	11.31	-1.696
Std Dev	10.42	-1.000
18	9.15	0.000
Median	9.15	0.000
18	7.90	0.984

151.XX Total Arsenic		
Lab	PPM	Total Method
43	15.50	-2.617
43	15.35	-2.513
Std Dev	13.18	-1.000
64	12.22	-0.328
61	12.00	-0.174
31	11.75	0.000
Median	11.75	0.000
140	11.31	0.311
Std Dev	10.32	1.000
24	10.30	1.012
18	9.15	1.815
18	7.90	2.687

165.99 Acid Soluble Boron			
Lab	PPM	Other	Total Method
24	0.00		0.000
Median	0.00		0.000

65.XX, ppm Acid Soluble Boron			
Lab	PPM	Other	Total Method
24	0.00		0.000
Median	0.00		0.000

181.30 Total Cadmium			
Lab	PPM	ICP	Total Method
43	5.34		-0.873
43	5.34		-0.866
64	4.90		-0.295
18	4.85		-0.230
Median	4.68		0.000
61	4.50		0.230
61	4.15		0.689
Std Dev	3.91		1.000
111	3.50		1.542
31	2.85		2.395

181.99 Total Cadmium			
Lab	PPM	Other	Total Method
18	5.45		-1.340
Std Dev	5.33		-1.000
Median	4.98		0.000

Std Dev 4.63 1.000			
24	4.51		1.340

181.XX Total Cadmium			
Lab	PPM	ICP	Total Method
18	5.45		-1.044
Std Dev	5.42		-1.000
43	5.34		-0.895
43	5.34		-0.888
64	4.90		-0.298
18	4.85		-0.230
Median	4.68		0.000
24	4.51		0.230
61	4.50		0.244
61	4.15		0.718
Std Dev	3.94		1.000
111	3.50		1.599
31	2.85		2.480

190.00 Aluminum			
Lab	%Al <sub>2</sub> O <sub>3</sub>	ICP	Total Method
9	1.48		-1.745
Std Dev	1.45		-1.000
9	1.45		-0.873
23	1.45		-0.873
23	1.44		-0.748
32	1.44		-0.623
34	1.43		-0.374
14	1.42		-0.249
14	1.41		0.000
32	1.41		0.000
Median	1.41		0.000
24	1.40		0.249
24	1.40		0.249
61	1.39		0.499
Std Dev	1.37		1.000
61	1.36		1.247
43	1.30		2.742
43	1.28		3.366
111	0.93		12.091

190.99 Aluminum			
Lab	%Al <sub>2</sub> O <sub>3</sub>	Atomic Absorption	Total Method
31	1.36		0.000

Median 1.36 0.000		
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190.XX Aluminum			
Lab	%Al <sub>2</sub> O <sub>3</sub>	ICP	Total Method
9	1.48		-1.251
Std Dev	1.47		-1.000
9	1.45		-0.625
23	1.45		-0.625
23	1.44		-0.536
32	1.44		-0.447
34	1.43		-0.268
14	1.42		-0.179
14	1.41		0.000
32	1.41		0.000
Median	1.41		0.000
24	1.40		0.179
24	1.40		0.179
61	1.39		0.357
61	1.36		0.893
31	1.36		0.983
Std Dev	1.35		1.000
43	1.30		1.965
43	1.28		2.412
111	0.93		8.665

191.30 Total Chromium			
Lab	PPM	ICP	Total Method
31	109.30		-13.166
Std Dev	72.99		-1.000
64	72.60		-0.871
43	72.00		-0.670
43	71.00		-0.335
61	70.00		0.000
Median	70.00		0.000
18	68.95		0.352
61	68.00		0.670
111	68.00		0.670
18	67.90		0.703

191.99 Total Chromium			
Lab	PPM	Other	Total Method
24	69.10		0.000
Median	69.10		0.000

191.XX Total Chromium		
Lab	PPM	Total Method
31	109.30	-15.164
64	72.60	-1.164
Std Dev	72.17	-1.000
43	72.00	-0.935
43	71.00	-0.553
61	70.00	-0.172
Median	69.55	0.000
24	69.10	0.172
18	68.95	0.229
61	68.00	0.591
111	68.00	0.591
18	67.90	0.629

202.30 Acid Soluble Cobalt		
Lab	PPM	ICP
64		

202.99 Acid Soluble Cobalt		
Lab	PPM	Other
24	4.04	0.000
Median	4.04	0.000

202.XX Acid Soluble Cobalt			
Lab	PPM	ICP	Total Method
64	4.67		-0.860
61	4.65		-0.841
61	4.25		-0.323
24	4.04		-0.045
43	4.00		0.000
43	4.00		0.000
Median	4.00		0.000
18	3.55		0.582
Std Dev	3.23		1.000
31	3.03		1.254
18	2.90		1.422
111	2.00		2.586

221.00 Acid Soluble Copper			
Lab	PPM	Atomic Absorption	Total Method
219	1.63		0.000
Median	1.63		0.000



221.30 Acid Soluble Copper		
Lab	PPM	ICP
61	<0.4	0.000
61	<0.4	0.000
111	5.50	-1.204
Std Dev	5.05	-1.000
18	3.95	-0.500
18	2.85	0.000
Median	2.85	0.000
43	1.00	0.840
43	1.00	0.840

221.99 Acid Soluble Copper		
Lab		Other
24	2.06	0.000
Median	2.06	0.000

221.XX Acid Soluble Copper		
Lab	PPM	Total Method
61	<0.4	0.000
61	<0.4	0.000
111	5.50	-1.694
Std Dev	4.25	-1.000
18	3.95	-0.832
18	2.85	-0.221
Median	2.45	0.000
24	2.06	0.221
43	1.00	0.807
43	1.00	0.807

241.30 Acid Soluble Iron		
Lab	%Fe <sub>2</sub> O <sub>3</sub>	ICP
31	1.65	-2.010
61	1.64	-1.787
34	1.64	-1.563
111	1.63	-1.117
Std Dev	1.62	-1.000
32	1.62	-0.893
23	1.61	-0.223
24	1.61	-0.223
61	1.61	-0.223
24	1.60	0.000
32	1.60	0.000
Median	1.60	0.000

9	1.60	0.223
9	1.60	0.223
23	1.59	0.447
Std Dev	1.58	1.000
14	1.55	2.233
14	1.51	4.020
43	1.30	13.400
43	1.28	14.517

241.99 Acid Soluble Iron		
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Other
219	1.60	0.000
Median	1.60	0.000

241.XX Acid Soluble Iron		
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Total Method
31	1.65	-1.831
61	1.64	-1.608
34	1.64	-1.385
219	1.63	-1.295
Std Dev	1.63	-1.000
111	1.63	-0.938
32	1.62	-0.715
23	1.61	-0.045
24	1.61	-0.045
61	1.61	-0.045
219	1.60	0.000
Median	1.60	0.000
24	1.60	0.179
32	1.60	0.179
9	1.60	0.402
9	1.60	0.402
23	1.59	0.625
Std Dev	1.58	1.000
14	1.55	2.412
14	1.51	4.199
43	1.30	13.579
43	1.28	14.695

251.30 Total Lead		
Lab	PPM	ICP
18	5.60	-1.751
Std Dev	4.20	-1.000
18	3.50	-0.628

43	2.35	-0.013
Median	2.33	0.000
43	2.30	0.013
Std Dev	0.45	1.000
61	0.18	1.150
61	0.15	1.163

251.99 Total Lead		
Lab		Other
24	1.23	0.000
Median	1.23	0.000

251.XX Total Lead		
Lab	PPM	Total Method
18	5.60	-1.990
Std Dev	3.96	-1.000
18	3.50	-0.724
43	2.35	-0.030
43	2.30	0.000
Median	2.30	0.000
24	1.23	0.645
Std Dev	0.64	1.000
61	0.18	1.281
61	0.15	1.296

261.30 Acid Soluble Manganese		
Lab		ICP
111	351.50	-1.340
Std Dev	344.74	-1.000
Median	324.85	0.000
Std Dev	304.96	1.000
31	298.20	1.340

261.99 Acid Soluble Manganese		
Lab	PPM	Other
219	370.50	-1.667
43	365.50	-1.248
43	363.50	-1.080
Std Dev	362.54	-1.000
219	360.45	-0.825
18	350.60	0.000
Median	350.60	0.000
24	350.50	0.008
61	347.50	0.260

61	347.50	0.260
18	345.05	0.465

261.XX Acid Soluble Manganese		
Lab	PPM	Total Method
219	370.50	-1.842
43	365.50	-1.379
43	363.50	-1.194
Std Dev	361.40	-1.000
219	360.45	-0.912
111	351.50	-0.083
18	350.60	0.000
Median	350.60	0.000
24	350.50	0.009
61	347.50	0.287
61	347.50	0.287
18	345.05	0.514
Std Dev	339.80	1.000
31	298.20	4.851

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	13.30	0.000
Median	13.30	0.000

289.XX Total Molybdenum		
Lab	PPM	Total Method
18	13.95	-1.673
Std Dev	13.44	-1.000
24	13.30	-0.820
64	13.05	-0.485

111	13.00	-0.426
43	12.75	-0.098
Median	12.68	0.000
43	12.60	0.098
18	12.50	0.230
Std Dev	11.91	1.000
61	11.85	1.082
61	11.50	1.542
31	6.65	7.906

291.30	Total Nickel	
Lab	ICP	
18		

291.99	Total Nickel	
Lab	PPM	Other
24	18.90	0.000
Median	18.90	0.000

291.XX	Total Nickel	
Lab	PPM	Total Method
18	19.50	-1.608
Std Dev	19.27	-1.000
61	19.00	-0.268
61	19.00	-0.268
64	18.97	-0.174
18	18.90	0.000
24	18.90	0.000
Median	18.90	0.000
Std Dev	18.53	1.000
43	18.50	1.072
43	18.00	2.412
31	10.45	22.646

301.30	Total Selenium	
Lab	PPM	ICP
61	<0.2	0.000
18	2.35	-0.061
18	2.30	0.000
Median	2.30	0.000
Std Dev	1.48	1.000
24	0.15	2.619

301.99	Total Selenium	
Lab	PPM	Other

140	0.82	0.000
Median	0.82	0.000

301.XX	Total Selenium	
Lab	PPM	Total Mthd
61	<0.2	0.000
18	2.35	-0.637
18	2.30	-0.597
Median	1.56	0.000
140	0.82	0.597
Std Dev	0.32	1.000
24	0.15	1.141

311.99	Sodium	
Lab	%Na <sub>2</sub> O	Other
31	0.26	-3.949
111	0.21	-1.128
Std Dev	0.20	-1.000
23	0.19	-0.282
24	0.19	-0.282
23	0.19	0.000
24	0.19	0.000
Median	0.19	0.000
61	0.17	0.846
Std Dev	0.17	1.000
61	0.17	1.128
43	0.15	2.186
43	0.14	2.307

311.XX	Sodium	
Lab	%Na <sub>2</sub> O	Total Method
31	0.26	-3.949
111	0.21	-1.128
Std Dev	0.20	-1.000
23	0.19	-0.282
24	0.19	-0.282
23	0.19	0.000
24	0.19	0.000
Median	0.19	0.000
61	0.17	0.846
Std Dev	0.17	1.000
61	0.17	1.128
43	0.15	2.186
43	0.14	2.307

321.00	Acid Soluble Zinc	
Lab	Atomic Absorption	
219	72.99	0.000
Median	72.99	0.000

321.30	Acid Soluble Zinc	
Lab	PPM	ICP
111	293.00	-14.174
47	99.50	-1.663
31	91.30	-1.132
Std Dev	89.25	-1.000
64	74.57	-0.051
Median	73.79	0.000
61	73.00	0.051
61	73.00	0.051
18	71.50	0.148
18	64.25	0.616

321.99	Acid Soluble Zinc	
Lab	Other	
43	73.00	-0.287
43	72.50	0.000
Median	72.50	0.000
Std Dev	70.76	1.000
219	68.33	2.393

321.XX	Acid Soluble Zinc	
Lab	PPM	Total Method
111	293.00	-45.336
47	99.50	-5.461
31	91.30	-3.771
Std Dev	77.85	-1.000
64	74.57	-0.324
43	73.00	0.000
61	73.00	0.000
61	73.00	0.000
Median	73.00	0.000
219	72.99	0.002
43	72.50	0.103
18	71.50	0.309
219	68.33	0.963
Std Dev	68.15	1.000
18	64.25	1.803

325.10	Fluoride	
Lab	%	Electrode
14	2.47	-1.705
14	2.45	-1.462
32	2.44	-1.340
32	2.41	-1.035
24	2.38	-0.670
24	2.37	-0.487
23	2.33	0.000
Median	2.33	0.000
34	2.31	0.244
9	2.30	0.305
23	2.30	0.305
9	2.26	0.792
31	1.94	4.751
111	1.32	12.243

325.99	Fluoride	
Lab	%	Other
61	2.40	-1.340
Median	2.38	0.000
61	2.37	1.340

325.XX	Fluoride	
Lab	%	Total Method
14	2.47	-1.276
14	2.45	-1.021
32	2.44	-0.893
32	2.41	-0.574
61	2.40	-0.447
24	2.38	-0.191
24	2.37	0.000
61	2.37	0.000
Median	2.37	0.000
23	2.33	0.510
34	2.31	0.766
9	2.30	0.830
23	2.30	0.830
9	2.26	1.340
31	1.94	5.488
111	1.32	13.336