

## AFPC

2018-01

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	16.99	0.00
Ammoniacal Nitrogen, Other		001.99	13	16.82	0.19
Method Group 001.XX PCT			14	16.85	0.23
<b>TOTAL NITROGEN</b>					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	17.16	0.17
Total Nitrogen, Combustion	993.13	010.60	20	17.69	0.13
Total Nitrogen, Other		010.99	5	17.67	0.31
Method Group 010.XX PCT			28	17.68	0.25
<b>TOTAL PHOSPHATE</b>					
Total Phosphate, Gravimetric Quimociac		020.10	2	46.11	0.04
Total Phosphate, Spectrometric	978.02	020.20	21	45.97	0.20
Total Phosphate, ICP	970.03	020.40	1	46.22	0.00
Total Phosphate, ICP, Lithium	970.02	020.50	1	46.45	0.00
Total Phosphate, Other	993.13	020.99	1	47.43	0.00
Method Group 020.XX PCT			26	46.04	0.45
<b>INSOLUBLE PHOSPHATE</b>					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	8	0.07	0.03
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.08	0.00
Insoluble Phosphate, Automated	978.01	030.40	1	0.06	0.00
Insoluble Phosphate, Other		030.99	2	0.05	0.01
Method Group 030.XX PCT			12	0.06	0.02
<b>INDIRECT AVAILABLE PHOSPHATE</b>					
Indirect Available Phosphate, Spectrometric	960.02	040.20	8	45.88	0.17
Indirect Available Phosphate, Other		040.99	4	45.89	0.08
Method Group 040.XX PCT			12	45.88	0.17
<b>DIRECT AVAILABLE PHOSPHATE</b>					
Direct Available Phosphate, Spectrometric	960.03D	041.20	1	45.90	0.00
Direct Available Phosphate, ICP		041.50	2	46.15	0.93
Direct Available Phosphate, EDTA Extract	993.01	041.60	4	46.26	1.18
Method Group 041.XX PCT			7	45.94	1.15
<b>WATER SOLUBLE PHOSPHATE</b>					
Water Soluble Phosphate, Gravimetric Quimociac	962.03	048.10	1	40.54	0.00
Water Soluble Phosphate, Spectrometric	970.01	048.20	13	41.18	0.35
Water Soluble Phosphate, Other		048.99	4	41.32	0.41
Method Group 048.XX PCT			18	41.18	0.48
<b>SOLUBLE POTASH AS K<sub>2</sub>O</b>					
Soluble Potash, ICP(Oxalate)		050.50	2	0.08	0.00
Soluble Potash, ICP(Citrate)		050.51	1	0.10	0.00
Soluble Potash, Other		050.99	9	0.09	0.01
Method Group 050.XX PCT			12	0.09	0.01
<b>FREE WATER</b>					
Free Water, Vacuum Oven	965.08B	060.00	14	2.49	0.33
Free Water, Vacuum Desiccate	965.08A	060.10	2	2.44	0.02
Free Water, Other		060.99	5	2.57	0.18
Method Group 060.XX PCT			21	2.55	0.21
<b>ACID SOLUBLE CALCIUM AS CaO</b>					
Acid Soluble Calcium, ICP		101.30	16	0.24	0.02
Method Group 101.XX PCT			16	0.24	0.03
<b>ACID SOLUBLE MAGNESIUM AS MgO</b>					
Acid Soluble Magnesium, ICP		121.30	14	1.78	0.13
Acid Soluble Magnesium, Other		121.99	2	1.70	0.00
Method Group 121.XX PCT			16	1.77	0.11
<b>WATER SOLUBLE MAGNESIUM</b>					
Water Soluble Magnesium, Other		131.99	1	0.06	0.00
Method Group 131.XX PCT			1	0.06	0.00
<b>SULFATE SULFUR (S)</b>					

Sulfur, Gravimetric	980.02(a)	144.01	2	1.27	0.03
Sulfur, Other		144.99	15	1.23	0.02
Method Group 144.XX PCT			17	1.23	0.03
<b>TOTAL SULFUR (S)</b>					
Sulfur, Other		145.99	3	1.26	0.0
Method Group 145.XX PCT			3	1.26	0.0
<b>TOTAL ARSENIC</b>					
Total Arsenic, ICP	980.02(b)	151.02	8	20.3	1.8
Total Arsenic, Other		151.99	2	16.5	0.7
Method Group 151.XX PPM			10	19.8	4.2
<b>ACID SOLUBLE BORON</b>					
Acid Soluble Boron, Other		165.99	4	99	47.2
Method Group 165.XX PPM			4	99	57.5
<b>WATER SOLUBLE BORON</b>					
Water Soluble Boron, Other		171.99	1	45	0.0
Method Group 171.XX PPM			1	45	0.0
<b>TOTAL CADMIUM</b>					
Total Cadmium, Atomic Absorbtion		181.00	1	3	0.0
Total Cadmium, ICP		181.30	7	3.4	0.6
Total Cadmium, Other		181.99	2	2.6	0.4
Method Group 181.XX PPM			10	3.3	0.5
<b>ALUMINUM AS Al<sub>2</sub>O<sub>3</sub></b>					
ICP, %			16	1.22	0.03
Water Soluble Chlorine, Other, %		190.99	2	1.21	0.00
Method Group 190.XX PCT			18	1.22	0.03
<b>TOTAL CHROMIUM</b>					
Total Chromium, Atomic Absorbtion		191.00	1	96	0.0
Total Chromium, ICP		191.30	8	99	3.4
Total Chromium, Other		191.99	2	102	4.9
Method Group 191.XX PPM			11	99	6.8
<b>ACID SOLUBLE COBALT</b>					
Acid Soluble Cobalt, ICP		202.30	6	4	0.2
Acid Soluble Cobalt, Other		202.99	1	4	0.0
Method Group 202.XX PPM			7	4	0.2
<b>ACID SOLUBLE COPPER</b>					
Acid Soluble Copper, Other		221.99	1	0.9	0.0
Method Group 221.XX PPM			3	1.0	0.2
<b>ACID SOLUBLE IRON AS Fe<sub>2</sub>O<sub>3</sub></b>					
Acid Soluble Iron, ICP		241.30	16	1.71	0.05
Acid Soluble Iron, Other		241.99	2	1.68	0.02
Method Group 241.XX PCT			18	1.71	0.06
<b>TOTAL LEAD</b>					
Total Lead, Atomic Absorbtion		251.00	1	1	0.0
Total Lead, ICP		251.30	7	1	0.6
Total Lead, Other		251.99	1	0.9	0.0
Method Group 251.XX PPM			9	1	0.7
<b>ACID SOLUBLE MANGANESE</b>					
Acid Soluble Manganese, ICP	972.02a	261.30	2	268	7.8
Acid Soluble Manganese, Other		261.99	6	271	41.3
Method Group 261.XX PPM			8	268	34.7
<b>WATER SOLUBLE MANGANESE</b>					
Water Soluble Manganese, Other		271.99	1	11	0
Method Group 271.XX PCT			1	11	0.0
<b>TOTAL MOLYBDENUM</b>					
Total Molybdenum, ICP		289.30	6	9	0.7
Total Molybdenum, Other		289.99	2	9	1.1
Method Group 289.XX PPM			8	9	1.4
<b>TOTAL NICKEL</b>					
Total Nickel, ICP		291.30	7	17.0	1.5
Total Nickel, icp		291.99	2	14.7	1.3
Method Group 291.XX PPM			9	16.4	2.8
<b>TOTAL SELENIUM</b>					

Total Selenium, ICP	301.30	3	0.1	0.6
Total Selenium, Other	301.99	1	1	0.0
Method Group 301.XX PPM		4	0.6	1.0
<b>SODIUM AS Na<sub>2</sub>O</b>				
Sodium, Atomic Absorbtion	983.04 311.00	1	0.23	0.00
Sodium, Other	311.99	10	0.18	0.02
Method Group 311.XX PCT		11	0.18	0.03
<b>ACID SOLUBLE ZINC</b>				
Acid Soluble Zinc, ICP	321.30	6	38.4	3.1
Acid Soluble Zinc, Other	321.99	4	38.8	2.0
Method Group 321.XX %		10	38.6	3.0
<b>FLUORIDE</b>				
Volumetric	325.10	13	1.89	0.03
Distilled/Electrode	325.99	4	1.92	0.01
Method Group 325.XX PCT		17	1.91	0.04

001.10 Ammoniacal Nitrogen		
Lab	MgO distillation	
31	16.99	0.000
<b>Median</b>	<b>16.99</b>	<b>0.000</b>

001.99 Ammoniacal Nitrogen		
Lab	Other	
113	17.16	-1.787
330	17.09	-1.393
<b>Std Dev</b>	<b>17.01</b>	<b>-1.000</b>
275	16.99	-0.893
140	16.98	-0.815
24	16.90	-0.394
24	16.88	-0.289
34	16.82	0.000
<b>Median</b>	<b>16.82</b>	<b>0.000</b>
61	16.80	0.131
275	16.76	0.315
32	16.72	0.525
32	16.72	0.552
<b>Std Dev</b>	<b>16.63</b>	<b>1.000</b>
61	16.62	1.077
79	16.58	1.287

001.XX Ammoniacal Nitrogen		
Lab	Total Method	
113	17.16	-1.658
330	17.09	-1.260
<b>Std Dev</b>	<b>17.04</b>	<b>-1.000</b>
275	16.99	-0.756
31	16.99	-0.730
140	16.98	-0.677
24	16.90	-0.252
24	16.88	-0.146
<b>Median</b>	<b>16.85</b>	<b>0.000</b>
34	16.82	0.146
61	16.80	0.279
275	16.76	0.464
32	16.72	0.677
32	16.72	0.703
<b>Std Dev</b>	<b>16.66</b>	<b>1.000</b>
61	16.62	1.234
79	16.58	1.446

010.11 Total Nitrogen		
Lab	Modified Comprehensive	
113	17.61	-2.650
<b>Std Dev</b>	<b>17.33</b>	<b>-1.000</b>
43	17.16	0.000
<b>Median</b>	<b>17.16</b>	<b>0.000</b>
43	17.16	0.030

010.60 Total Nitrogen		
Lab	Combustion	
66	17.90	-1.548
24	17.89	-1.472
24	17.86	-1.283
<b>Std Dev</b>	<b>17.82</b>	<b>-1.000</b>
49	17.81	-0.868
63	17.80	-0.830
14	17.77	-0.604
110	17.75	-0.415
111	17.74	-0.340
14	17.73	-0.302
31	17.69	0.000
140	17.69	0.000
<b>Median</b>	<b>17.69</b>	<b>0.000</b>
61	17.68	0.075
79	17.68	0.075
61	17.61	0.604
38	17.60	0.679
80	17.60	0.679
<b>Std Dev</b>	<b>17.56</b>	<b>1.000</b>
77	17.52	1.321
99	17.47	1.661
137	17.43	2.001
103	10.85	51.675

010.99 Total Nitrogen		
Lab	Other	
23	17.84	-0.549
330	17.80	-0.436
23	17.67	0.000
<b>Median</b>	<b>17.67</b>	<b>0.000</b>
32	17.39	0.904
32	17.38	0.920

010.XX Total Nitrogen		
Lab	Total Method	
66	17.90	-1.052
24	17.89	-1.003
<b>Std Dev</b>	<b>17.88</b>	<b>-1.000</b>
24	17.86	-0.881
23	17.84	-0.759
49	17.81	-0.612
63	17.80	-0.587
330	17.80	-0.587
14	17.77	-0.441
110	17.75	-0.318
111	17.74	-0.269
14	17.73	-0.245
31	17.69	-0.049
140	17.69	-0.049
61	17.68	0.000
79	17.68	0.000
<b>Median</b>	<b>17.68</b>	<b>0.000</b>
23	17.67	0.073
61	17.61	0.343
113	17.61	0.367
38	17.60	0.392
80	17.60	0.392
77	17.52	0.808
<b>Std Dev</b>	<b>17.48</b>	<b>1.000</b>
99	17.47	1.028
137	17.43	1.248
32	17.39	1.444
32	17.38	1.468
43	17.16	2.545
43	17.16	2.570
103	10.85	33.457

020.10 Total Phosphate		
Lab	Gravimetric Quimociac	
241	46.17	-1.340
<b>Std Dev</b>	<b>46.16</b>	<b>-1.000</b>
<b>Median</b>	<b>46.11</b>	<b>0.000</b>
<b>Std Dev</b>	<b>46.07</b>	<b>1.000</b>
113	46.06	1.340

020.20 Total Phosphate		
Lab	Spectrometric	

99	47.50	-7.762
110	47.22	-6.346
275	46.53	-2.857
111	46.46	-2.478
275	46.45	-2.452
<b>Std Dev</b>	<b>46.16</b>	<b>-1.000</b>
140	46.11	-0.733
24	46.11	-0.708
34	46.09	-0.607
61	46.02	-0.278
32	45.99	-0.101
23	45.97	0.000
<b>Median</b>	<b>45.97</b>	<b>0.000</b>
31	45.96	0.025
61	45.95	0.101
24	45.91	0.278
32	45.89	0.379
43	45.85	0.607
23	45.84	0.657
79	45.82	0.758
43	45.78	0.961
<b>Std Dev</b>	<b>45.77</b>	<b>1.000</b>
14	45.75	1.112
14	45.71	1.289

020.40 Total Phosphate		
Lab	Automated	
137	46.22	0.000
<b>Median</b>	<b>46.22</b>	<b>0.000</b>

020.50 Total Phosphate		
Lab	ICP	
111	46.45	0.000
<b>Median</b>	<b>46.45</b>	<b>0.000</b>

020.99 Total Phosphate		
Lab	Other	
330	47.43	0.000
<b>Median</b>	<b>47.43</b>	<b>0.000</b>

020.XX Total Phosphate		
Lab	Total Method	
99	47.50	-3.979
330	47.43	-3.789

110	47.22	-3.217
275	46.53	-1.340
111	46.46	-1.136
275	46.45	-1.122
111	46.45	-1.109
<b>Std Dev</b>	<b>46.41</b>	<b>-1.000</b>
137	46.22	-0.483
241	46.17	-0.361
140	46.11	-0.197
24	46.11	-0.184
34	46.09	-0.129
113	46.06	-0.048
<b>Median</b>	<b>46.04</b>	<b>0.000</b>
61	46.02	0.048
32	45.99	0.143
23	45.97	0.197
31	45.96	0.211
61	45.95	0.252
24	45.91	0.347
32	45.89	0.401
43	45.85	0.524
23	45.84	0.551
79	45.82	0.605
43	45.78	0.714
14	45.75	0.796
14	45.71	0.891

<b>030.20</b> Insoluble Phosphate		
Lab		Spectrometric
113	0.21	-5.459
61	0.10	-1.092
<b>Std Dev</b>	<b>0.10</b>	<b>-1.000</b>
23	0.09	-0.695
24	0.08	-0.298
<b>Median</b>	<b>0.07</b>	<b>0.000</b>
140	0.07	0.298
23	0.06	0.496
24	0.06	0.695
79	0.06	0.695

<b>030.30</b> Insoluble Phosphate		
Lab		Alka. Quimociac
31	0.08	0.000
<b>Median</b>	<b>0.08</b>	<b>0.000</b>

<b>030.40</b> Insoluble Phosphate		
Lab		Automated
34	0.06	0.000
<b>Median</b>	<b>0.06</b>	<b>0.000</b>

<b>030.99</b> Insoluble Phosphate		
Lab		Other
32	0.06	-1.340
<b>Std Dev</b>	<b>0.06</b>	<b>-1.000</b>
<b>Median</b>	<b>0.05</b>	<b>0.000</b>
<b>Std Dev</b>	<b>0.05</b>	<b>1.000</b>
32	0.05	1.340

<b>030.XX</b> Insoluble Phosphate		
Lab		Total Method
113	0.21	-8.322
61	0.10	-2.116
23	0.09	-1.552
<b>Std Dev</b>	<b>0.08</b>	<b>-1.000</b>
24	0.08	-0.987
31	0.08	-0.987
140	0.07	-0.141
<b>Median</b>	<b>0.06</b>	<b>0.000</b>
23	0.06	0.141
32	0.06	0.141
34	0.06	0.141
24	0.06	0.423
79	0.06	0.423
32	0.05	0.987

<b>040.20</b> Indirect Available Phosphate		
Lab		Spectrometric
61	46.39	-2.957
24	46.05	-1.005
<b>Std Dev</b>	<b>46.05</b>	<b>-1.000</b>
140	46.05	-0.976
31	45.88	-0.015
<b>Median</b>	<b>45.88</b>	<b>0.000</b>
23	45.88	0.015
24	45.83	0.277
23	45.78	0.597
79	45.76	0.685

<b>040.99</b> Indirect Available Phosphate		
Lab		Other
34	46.03	-1.787
<b>Std Dev</b>	<b>45.96</b>	<b>-1.000</b>
32	45.93	-0.510
<b>Median</b>	<b>45.89</b>	<b>0.000</b>
32	45.85	0.510
113	45.85	0.510

<b>040.XX</b> Indirect Available Phosphate		
Lab		Total Method
61	46.39	-3.603
24	46.05	-1.225
140	46.05	-1.189
34	46.03	-1.047
<b>Std Dev</b>	<b>46.02</b>	<b>-1.000</b>
32	45.93	-0.337
31	45.88	-0.018
<b>Median</b>	<b>45.88</b>	<b>0.000</b>
23	45.88	0.018
32	45.85	0.231
113	45.85	0.231
24	45.83	0.337
23	45.78	0.728
79	45.76	0.834

<b>041.20</b> Direct Available Phosphate		
Lab		Spectrometric
38	45.90	0.000
<b>Median</b>	<b>45.90</b>	<b>0.000</b>

<b>041.50</b> Direct Available Phosphate		
Lab		ICP
63	47.39	-1.340
<b>Std Dev</b>	<b>47.07</b>	<b>-1.000</b>
<b>Median</b>	<b>46.15</b>	<b>0.000</b>
<b>Std Dev</b>	<b>45.22</b>	<b>1.000</b>
80	44.90	1.340

<b>041.60</b> Direct Available Phosphate		
Lab		EDTA Extract
103	49.97	-3.135
<b>Std Dev</b>	<b>47.44</b>	<b>-1.000</b>
77	46.58	-0.271

<b>Median</b>	<b>46.26</b>	<b>0.000</b>
49	45.94	0.271
137	45.55	0.601

<b>041.XX</b> Direct Available Phosphate		
Lab		Total Method
103	49.97	-4.272
63	47.39	-1.539
<b>Std Dev</b>	<b>46.88</b>	<b>-1.000</b>
77	46.58	-0.679
49	45.94	0.000
<b>Median</b>	<b>45.94</b>	<b>0.000</b>
38	45.90	0.048
137	45.55	0.414
<b>Std Dev</b>	<b>45.00</b>	<b>1.000</b>
80	44.90	1.104

<b>048.10</b> Water Soluble Phosphate		
Lab		Gravimetric Quimociac
113	40.54	0.000
<b>Median</b>	<b>40.54</b>	<b>0.000</b>

<b>048.20</b> Water Soluble Phosphate		
Lab		Spectrometric
330	43.96	-7.843
14	42.03	-2.384
14	41.93	-2.116
24	41.57	-1.100
<b>Std Dev</b>	<b>41.53</b>	<b>-1.000</b>
23	41.45	-0.762
61	41.26	-0.212
23	41.18	0.000
<b>Median</b>	<b>41.18</b>	<b>0.000</b>
31	41.16	0.071
61	41.15	0.099
24	41.10	0.240
79	40.99	0.536
140	40.97	0.607
<b>Std Dev</b>	<b>40.83</b>	<b>1.000</b>
111	39.90	3.611

<b>048.99</b> Water Soluble Phosphate		
Lab		Other
32	41.66	-0.841

32	41.46	-0.353
Median	41.32	0.000
34	41.17	0.353
Std Dev	40.90	1.000
111	40.33	2.400

048.XX Water Soluble Phosphate		
Lab	Total Method	
330	43.96	-7.091
14	42.03	-2.164
14	41.93	-1.922
32	41.66	-1.235
24	41.57	-1.006
Std Dev	41.57	-1.000
32	41.46	-0.726
23	41.45	-0.700
61	41.26	-0.204
23	41.18	-0.013
Median	41.18	0.000
34	41.17	0.013
31	41.16	0.051
61	41.15	0.076
24	41.10	0.204
79	40.99	0.471
140	40.97	0.535
Std Dev	40.78	1.000
113	40.54	1.617
111	40.33	2.152
111	39.90	3.247

050.50 %K <sub>2</sub> O Soluble Potash		
Lab	ICP(Oxalate)	
23	0.08	-1.340
Std Dev	0.08	-1.000
Median	0.08	0.000
Std Dev	0.07	1.000
23	0.07	1.340

050.51 %K <sub>2</sub> O Soluble Potash		
Lab	ICP(Citrate)	
137	0.10	0.000
Median	0.10	0.000

050.99 Soluble Potash		
Lab	%K <sub>2</sub> O	Other
111	0.12	-3.350
61	0.10	-1.340
80	0.10	-1.340
Std Dev	0.10	-1.000
24	0.09	0.000
24	0.09	0.000
31	0.09	0.000
61	0.09	0.000
Median	0.09	0.000
43	0.09	0.486
43	0.09	0.535

050.XX Soluble Potash		
Lab	%K <sub>2</sub> O	Total Method
111	0.12	-2.442
Std Dev	0.10	-1.000
61	0.10	-0.977
80	0.10	-0.977
137	0.10	-0.977
24	0.09	0.000
24	0.09	0.000
31	0.09	0.000
61	0.09	0.000
Median	0.09	0.000
43	0.09	0.354
43	0.09	0.390
23	0.08	0.977
Std Dev	0.08	1.000
23	0.07	1.953

060.00 Free Water		
Lab	Vacuum Oven	
43	2.74	-0.728
31	2.71	-0.638
111	2.69	-0.578
43	2.65	-0.473
113	2.63	-0.398
24	2.55	-0.173
24	2.52	-0.083
Median	2.49	0.000
34	2.47	0.083
140	2.42	0.233

79	2.36	0.413
Std Dev	2.16	1.000
23	2.15	1.043
32	2.00	1.479
32	1.94	1.674
23	1.72	2.320

060.10 Free Water		
Lab	Vacuum Desiccate	
61	2.47	-1.340
Std Dev	2.46	-1.000
Median	2.44	0.000
Std Dev	2.42	1.000
61	2.42	1.340

060.99 Free Water		
Lab	Other	
330	3.11	-3.051
275	2.79	-1.254
Std Dev	2.75	-1.000
275	2.57	0.000
Median	2.57	0.000
14	2.56	0.086
14	2.55	0.114

060.XX Free Water		
Lab	Total Method	
330	3.11	-3.165
275	2.79	-1.369
43	2.74	-1.055
Std Dev	2.73	-1.000
31	2.71	-0.884
111	2.69	-0.770
43	2.65	-0.570
113	2.63	-0.428
275	2.57	-0.114
14	2.56	-0.029
14	2.55	0.000
24	2.55	0.000
Median	2.55	0.000
24	2.52	0.171
61	2.47	0.456
34	2.47	0.485
61	2.42	0.770

140	2.42	0.770
Std Dev	2.37	1.000
79	2.36	1.112
23	2.15	2.309
32	2.00	3.136
32	1.94	3.507
23	1.72	4.733

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
32	0.32	-3.092
23	0.29	-2.062
61	0.29	-1.855
61	0.27	-1.237
24	0.27	-1.031
Std Dev	0.26	-1.000
24	0.26	-0.618
23	0.24	0.000
32	0.24	0.000
34	0.24	0.000
111	0.24	0.000
Median	0.24	0.000
14	0.24	0.206
31	0.24	0.206
14	0.23	0.412
330	0.23	0.412
43	0.23	0.477
43	0.23	0.521

101.XX Acid Soluble Calcium		
Lab	%CaO	Total Method
32	0.32	-3.092
23	0.29	-2.062
61	0.29	-1.855
61	0.27	-1.237
24	0.27	-1.031
Std Dev	0.26	-1.000
24	0.26	-0.618
23	0.24	0.000
32	0.24	0.000
34	0.24	0.000
111	0.24	0.000
Median	0.24	0.000
14	0.24	0.206

31	0.24	0.206
14	0.23	0.412
330	0.23	0.412
43	0.23	0.477
43	0.23	0.521

121.30 Acid Soluble Magnesium		
Lab	%MgO	ICP
23	1.84	-0.476
61	1.82	-0.318
23	1.82	-0.278
34	1.81	-0.238
61	1.81	-0.199
24	1.79	-0.079
32	1.79	-0.040
Median	1.78	0.000
24	1.78	0.040
32	1.77	0.119
31	1.70	0.635
Std Dev	1.65	1.000
14	1.62	1.271
14	1.61	1.350
43	1.58	1.628
43	1.57	1.707

121.99 Acid Soluble Magnesium		
Lab	%MgO	Other
330	1.71	-1.340
Std Dev	1.70	-1.000
Median	1.70	0.000
Std Dev	1.70	1.000
111	1.70	1.340

121.XX Acid Soluble Magnesium		
Lab	%MgO	Total Method
23	1.84	-0.743
61	1.82	-0.531
23	1.82	-0.478
34	1.81	-0.425
61	1.81	-0.371
24	1.79	-0.212
32	1.79	-0.159
24	1.78	-0.053
Median	1.77	0.000

32	1.77	0.053
330	1.71	0.690
31	1.70	0.743
111	1.70	0.743
Std Dev	1.68	1.000
14	1.62	1.592
14	1.61	1.698
43	1.58	2.070
43	1.57	2.176

144..01 Sulfate Sulfur (S)		
Lab	Gravimetric	
241	1.31	-1.340
Std Dev	1.30	-1.000
Median	1.27	0.000
Std Dev	1.24	1.000
79	1.23	1.340

144.99 Sulfate Sulfur (S)		
Lab	Other	
330	3.71	-102.046
275	1.26	-1.237
23	1.26	-1.031
Std Dev	1.25	-1.000
32	1.25	-0.825
14	1.24	-0.412
23	1.24	-0.206
24	1.24	-0.206
34	1.23	0.000
Median	1.23	0.000
32	1.22	0.412
275	1.22	0.412
24	1.22	0.618
14	1.21	0.825
Std Dev	1.21	1.000
31	1.19	1.855
61	1.19	1.855
61	1.15	3.505

144.XX Sulfate Sulfur (S)		
Lab	Total Method	
330	3.71	-94.757
241	1.31	-3.063
275	1.26	-1.149

Std Dev	1.26	-1.000
23	1.26	-0.957
32	1.25	-0.766
14	1.24	-0.383
23	1.24	-0.191
24	1.24	-0.191
34	1.23	0.000
79	1.23	0.000
Median	1.23	0.000
32	1.22	0.383
275	1.22	0.383
24	1.22	0.574
14	1.21	0.766
Std Dev	1.20	1.000
31	1.19	1.723
61	1.19	1.723
61	1.15	3.254

145.99 Total Sulfur (S)		
Lab	Other	
43	1.28	-0.473
111	1.26	0.000
Median	1.26	0.000
Std Dev	1.23	1.000
43	1.19	2.207

145.XX Total Sulfur (S)		
Lab	Total Method	
43	1.28	-0.473
111	1.26	0.000
Median	1.26	0.000
Std Dev	1.23	1.000
43	1.19	2.207

151.30 Total Arsenic		
Lab	ICP	
113	30.80	-6.016
Std Dev	22.00	-1.000
43	21.05	-0.456
43	20.85	-0.342
61	20.50	-0.143
Median	20.25	0.000
330	20.00	0.143
61	19.50	0.428

Std Dev	18.50	1.000
24	15.70	2.594
111	8.00	6.985

151.99 Total Arsenic		
Lab	Other	
140	17.42	-1.340
Std Dev	17.18	-1.000
Median	16.48	0.000
Std Dev	15.79	1.000
31	15.55	1.340

151.XX Total Arsenic		
Lab	Total Method	
113	30.80	-3.195
Std Dev	23.21	-1.000
43	21.05	-0.376
43	20.85	-0.318
61	20.50	-0.217
330	20.00	-0.072
Median	19.75	0.000
61	19.50	0.072
140	17.42	0.675
Std Dev	16.29	1.000
24	15.70	1.171
31	15.55	1.215
111	8.00	3.398

165.99 Acid Soluble Boron		
Lab	PPM	Other
275	138.61	-0.842
275	125.46	-0.563
Median	98.91	0.000
330	72.36	0.563
Std Dev	51.73	1.000
24	45.05	1.142

165.XX, ppm Acid Soluble Boron		
Lab	PPM	Total Method
275	138.61	-0.842
275	125.46	-0.563
Median	98.91	0.000
330	72.36	0.563
Std Dev	51.73	1.000

24	45.05	1.142
171.99 Water Soluble Boron		
Lab	PPM	Other
330	44.50	0.000
Median	44.50	0.000

171.XX Water Soluble Boron		
Lab	PPM	Total Method
330	44.50	0.000
Median	44.50	0.000

181.00 Total Cadmium		
Lab		Atomic Absorbion
330	3.46	0.000
Median	3.46	0.000

181.30 Total Cadmium		
Lab	PPM	ICP
43	4.26	-1.441
43	4.14	-1.239
Std Dev	3.99	-1.000
275	3.52	-0.243
275	3.37	0.000
Median	3.37	0.000
61	3.00	0.599
111	3.00	0.599
Std Dev	2.75	1.000
113	2.60	1.247

181.99 Total Cadmium		
Lab		Other
24	3.18	-1.340
Std Dev	3.04	-1.000
Median	2.62	0.000
Std Dev	2.19	1.000
31	2.05	1.340

181.XX Total Cadmium		
Lab	PPM	Total Method
43	4.26	-2.620
43	4.14	-2.288
Std Dev	3.65	-1.000
275	3.52	-0.652

330	3.46	-0.479
275	3.37	-0.253
Median	3.28	0.000
24	3.18	0.253
61	3.00	0.732
111	3.00	0.732
Std Dev	2.90	1.000
113	2.60	1.796
31	2.05	3.259

190.00 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	ICP
275	1.35	-4.238
14	1.29	-2.094
14	1.28	-1.926
32	1.26	-1.089
Std Dev	1.25	-1.000
34	1.24	-0.586
23	1.24	-0.419
61	1.23	-0.251
24	1.23	-0.084
Median	1.22	0.000
23	1.22	0.084
24	1.22	0.084
32	1.22	0.084
61	1.22	0.251
Std Dev	1.19	1.000
43	1.17	1.759
275	1.17	1.809
43	1.17	1.926
111	0.88	11.641

190.99 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Atomic Absorption
31	1.21	0.000
330	1.21	0.000
Median	1.21	0.000

190.XX Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Total Method
275	1.35	-6.013
14	1.29	-3.030
14	1.28	-2.797
32	1.26	-1.631

Std Dev	1.24	-1.000
34	1.24	-0.932
23	1.24	-0.699
61	1.23	-0.466
24	1.23	-0.233
23	1.22	0.000
24	1.22	0.000
32	1.22	0.000
Median	1.22	0.000
61	1.22	0.233
31	1.21	0.466
330	1.21	0.466
Std Dev	1.20	1.000
43	1.17	2.330
275	1.17	2.400
43	1.17	2.563
111	0.88	16.080

191.00 Total Chromium		
Lab		Atomic Absorbion
330	96.05	0.000
Median	96.05	0.000

191.30 Total Chromium		
Lab		ICP
275	112.90	-4.042
275	106.10	-2.029
Std Dev	102.63	-1.000
61	102.00	-0.814
111	99.50	-0.074
Median	99.25	0.000
43	99.00	0.074
43	99.00	0.074
61	97.00	0.666
Std Dev	95.87	1.000
113	85.90	3.953

191.99 Total Chromium		
Lab	PPM	Other
31	108.55	-1.340
Std Dev	106.89	-1.000
Median	102.00	0.000
Std Dev	97.11	1.000
24	95.45	1.340

191.XX Total Chromium		
Lab	PPM	Total Method
275	112.90	-2.475
31	108.55	-1.701
275	106.10	-1.264
Std Dev	104.62	-1.000
61	102.00	-0.534
111	99.50	-0.089
43	99.00	0.000
43	99.00	0.000
Median	99.00	0.000
61	97.00	0.356
330	96.05	0.525
24	95.45	0.632
Std Dev	93.38	1.000
113	85.90	2.333

202.30 Acid Soluble Cobalt		
Lab	PPM	ICP
43		
202.99 Acid Soluble Cobalt		
Lab		Other
24	3.95	0.000
Median	3.95	0.000

202.XX Acid Soluble Cobalt		
Lab	PPM	Total Method
43	4.00	0.000
43	4.00	0.000
61	4.00	0.000
61	4.00	0.000
Median	4.00	0.000
24	3.95	0.339
Std Dev	3.85	1.000
330	3.66	2.341
111	3.50	3.392

221.30 Acid Soluble Copper		
Lab	PPM	ICP
61	<0.4	0.000
61	<0.4	0.000
43	1.00	0.000
43	1.00	0.000

Median 1.00 0.000

221.99		Acid Soluble Copper	
Lab		Other	
24	1.54		0.000
<b>Median</b>	<b>1.54</b>		<b>0.000</b>

221.XX		Acid Soluble Copper	
Lab	PPM	Total Method	
61	<0.4		0.000
61	<0.4		0.000
24	1.54		-2.680
<b>Std Dev</b>	<b>1.20</b>		<b>-1.000</b>
43	1.00		0.000
43	1.00		0.000
<b>Median</b>	<b>1.00</b>		<b>0.000</b>

241.30		Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	ICP	
111	1.80		-1.719
<b>Std Dev</b>	<b>1.76</b>		<b>-1.000</b>
24	1.76		-0.910
32	1.75		-0.809
24	1.74		-0.607
34	1.74		-0.607
43	1.73		-0.405
43	1.72		-0.202
23	1.71		0.000
23	1.71		0.000
<b>Median</b>	<b>1.71</b>		<b>0.000</b>
14	1.70		0.303
14	1.68		0.607
61	1.68		0.708
32	1.67		0.809
<b>Std Dev</b>	<b>1.66</b>		<b>1.000</b>
61	1.62		1.922
275	1.44		5.461
275	1.44		5.481

241.99		Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Other	
31	1.70		-1.340
<b>Std Dev</b>	<b>1.69</b>		<b>-1.000</b>
<b>Median</b>	<b>1.68</b>		<b>0.000</b>

**Std Dev 1.66 1.000**  
330 1.65 1.340

241.XX		Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Total Method	
111	1.80		-1.820
24	1.76		-1.011
<b>Std Dev</b>	<b>1.75</b>		<b>-1.000</b>
32	1.75		-0.910
24	1.74		-0.708
34	1.74		-0.708
43	1.73		-0.506
43	1.72		-0.303
23	1.71		-0.101
23	1.71		-0.101
<b>Median</b>	<b>1.71</b>		<b>0.000</b>
31	1.70		0.101
14	1.70		0.202
14	1.68		0.506
61	1.68		0.607
32	1.67		0.708
<b>Std Dev</b>	<b>1.66</b>		<b>1.000</b>
330	1.65		1.112
61	1.62		1.820
275	1.44		5.360
275	1.44		5.380

251.00		Total Lead	
Lab		Atomic Absorbtion	
330	1.00		0.000
<b>Median</b>	<b>1.00</b>		<b>0.000</b>

251.30		Total Lead	
Lab	PPM	ICP	
61	2.00		-1.556
43	1.80		-1.210
43	1.75		-1.124
<b>Std Dev</b>	<b>1.68</b>		<b>-1.000</b>
275	1.10		0.000
<b>Median</b>	<b>1.10</b>		<b>0.000</b>
61	1.00		0.173
275	1.00		0.173
113	0.90		0.346

251.99		Total Lead	
Lab		Other	
24	0.85		0.000
<b>Median</b>	<b>0.85</b>		<b>0.000</b>

251.XX		Total Lead	
Lab	PPM	Total Method	
61	2.00		-1.787
43	1.80		-1.429
43	1.75		-1.340
<b>Std Dev</b>	<b>1.56</b>		<b>-1.000</b>
275	1.10		-0.179
61	1.00		0.000
275	1.00		0.000
330	1.00		0.000
<b>Median</b>	<b>1.00</b>		<b>0.000</b>
113	0.90		0.179
24	0.85		0.268

261.30		Acid Soluble Manganese	
Lab		ICP	
111	278.50		-1.340
<b>Std Dev</b>	<b>275.84</b>		<b>-1.000</b>
<b>Median</b>	<b>268.00</b>		<b>0.000</b>
<b>Std Dev</b>	<b>260.16</b>		<b>1.000</b>
330	257.50		1.340

261.99		Acid Soluble Manganese	
Lab	PPM	Other	
31	292.20		-0.507
43	287.00		-0.381
43	286.00		-0.357
<b>Median</b>	<b>271.25</b>		<b>0.000</b>
24	256.50		0.357
<b>Std Dev</b>	<b>229.93</b>		<b>1.000</b>
61	223.00		1.168
61	220.50		1.228

261.XX		Acid Soluble Manganese	
Lab	PPM	Total Method	
31	292.20		-0.851
43	287.00		-0.668
43	286.00		-0.633
111	278.50		-0.369

**Median 268.00 0.000**  
330 257.50 0.369  
24 256.50 0.404  
**Std Dev 239.55 1.000**  
61 223.00 1.582  
61 220.50 1.670

271.99		Water Soluble Manganese	
Lab		Other	
330	11.00		0.000
<b>Median</b>	<b>11.00</b>		<b>0.000</b>

271.XX		Water Soluble Manganese	
Lab	PPM	Total Method	
330	11.00		0.000
<b>Median</b>	<b>11.00</b>		<b>0.000</b>

281.30		Total Mercury	
Lab	PPM	ICP	
24	<0.01		0.000
<b>Median</b>	<b>0.00</b>		<b>0.000</b>

281.XX		Total Mercury	
Lab	PPM	Total Method	
24	<0.01		0.000
<b>Median</b>	<b>0.00</b>		<b>0.000</b>

289.30		Total Molybdenum	
Lab	PPM	ICP	
111			

289.99		Total Molybdenum	
Lab	PPM	Other	
24	10.00		-1.340
<b>Std Dev</b>	<b>9.63</b>		<b>-1.000</b>
<b>Median</b>	<b>8.55</b>		<b>0.000</b>
<b>Std Dev</b>	<b>7.47</b>		<b>1.000</b>
31	7.10		1.340

289.XX		Total Molybdenum	
Lab	PPM	Total Method	
24	10.00		-1.158
111	10.00		-1.158
<b>Std Dev</b>	<b>9.82</b>		<b>-1.000</b>
43	9.10		-0.380

43	8.90	-0.207
Median	8.66	0.000
330	8.42	0.207
61	8.00	0.571
Std Dev	7.50	1.000
31	7.10	1.349
61	6.50	1.867

291.30	Total Nickel	
Lab	PPM	ICP
330		

291.99	Total Nickel	
Lab	PPM	Other
24	16.40	-1.340
Std Dev	15.97	-1.000
Median	14.70	0.000
Std Dev	13.43	1.000
31	13.00	1.340

291.XX	Total Nickel	
Lab	PPM	Total Method
330	19.60	-1.383
Std Dev	18.71	-1.000
43	17.00	-0.259
43	17.00	-0.259
61	17.00	-0.259
24	16.40	0.000
Median	16.40	0.000
61	16.00	0.173
Std Dev	14.09	1.000
275	13.90	1.081
275	13.36	1.314
31	13.00	1.470

301.30	Total Selenium	
Lab	PPM	ICP
140	1.70	-2.574
Std Dev	0.73	-1.000
24	0.12	0.000
Median	0.12	0.000
61	0.06	0.106

301.99	Total Selenium	
Lab	PPM	Other

330	1.00	0.000
Median	1.00	0.000

301.XX	Total Selenium	
Lab	PPM	Total Method
140	1.70	-1.421
Std Dev	1.36	-1.000
330	1.00	-0.551
Median	0.56	0.000
24	0.12	0.551
61	0.06	0.632

311.00	Sodium	
Lab	%Na <sub>2</sub> O	Atomic Absorbion
330	0.23	0.000
Median	0.23	0.000

311.99	Sodium	
Lab	%Na <sub>2</sub> O	Other
24	0.22	-2.010
111	0.21	-1.742
24	0.20	-1.206
Std Dev	0.20	-1.000
61	0.18	-0.134
61	0.18	-0.134
Median	0.18	0.000
31	0.18	0.134
23	0.17	0.402
23	0.17	0.402
Std Dev	0.16	1.000
43	0.15	1.432
43	0.15	1.494

311.XX	Sodium	
Lab	%Na <sub>2</sub> O	Total Method
330	0.23	-1.914
24	0.22	-1.340
111	0.21	-1.149
Std Dev	0.21	-1.000
24	0.20	-0.766
61	0.18	0.000
61	0.18	0.000
Median	0.18	0.000
31	0.18	0.191

23	0.17	0.383
23	0.17	0.383
Std Dev	0.15	1.000
43	0.15	1.119
43	0.15	1.163

321.30	Acid Soluble Zinc	
Lab	PPM	ICP
275	43.00	-1.516
Std Dev	41.43	-1.000
275	41.20	-0.926
24	38.75	-0.123
Median	38.38	0.000
61	38.00	0.123
61	36.00	0.779
111	36.00	0.779

321.99	Acid Soluble Zinc	
Lab	PPM	Other
43	40.00	-0.618
43	39.00	-0.124
Median	38.75	0.000
330	38.50	0.124
Std Dev	36.73	1.000
31	30.65	4.001

321.XX	Acid Soluble Zinc	
Lab	PPM	Total Method
275	43.00	-1.804
275	41.20	-1.062
Std Dev	41.05	-1.000
43	40.00	-0.567
43	39.00	-0.155
24	38.75	-0.052
Median	38.63	0.000
330	38.50	0.052
61	38.00	0.258
Std Dev	36.20	1.000
61	36.00	1.082
111	36.00	1.082
31	30.65	3.288

325.10	Fluoride	
Lab	%	Electrode

32	2.04	-4.467
79	1.96	-2.084
23	1.95	-1.936
24	1.92	-0.893
14	1.91	-0.596
14	1.89	-0.149
23	1.89	0.000
Median	1.89	0.000
275	1.88	0.149
34	1.88	0.298
32	1.87	0.447
24	1.86	0.744
275	1.80	2.531
111	0.26	48.389

325.99	Fluoride	
Lab	%	Other
31	1.97	-4.467
61	1.92	0.000
330	1.92	0.000
Median	1.92	0.000
61	1.91	0.893

325.XX	Fluoride	
Lab	%	Total Method
32	2.04	-4.355
31	1.97	-2.010
79	1.96	-1.675
23	1.95	-1.508
24	1.92	-0.335
61	1.92	-0.335
330	1.92	-0.335
14	1.91	0.000
61	1.91	0.000
Median	1.91	0.000
14	1.89	0.502
23	1.89	0.670
275	1.88	0.837
34	1.88	1.005
32	1.87	1.172
24	1.86	1.507
275	1.80	3.517
111	0.26	55.108