

## AFPC

2014-06

Grade

11-52-0

## Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
<b>AMMONIACAL NITROGEN</b>					
Ammoniacal Nitrogen, Other		001.99	15	11.21	0.06
Method Group 001.XX PCT			15	11.21	0.07
<b>TOTAL NITROGEN</b>					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	11.25	0.04
Total Nitrogen, Salicylic	955.04d	010.12	1	11.19	0.00
Total Nitrogen, Combustion	993.13	010.60	22	11.21	0.12
Total Nitrogen, Other		010.99	2	11.20	0.00
Method Group 010.XX PCT			28	11.21	0.14
<b>TOTAL PHOSPHATE</b>					
Total Phosphate, Gravimetric Quimociac		020.10	1	54.31	0.00
Total Phosphate, Spectrometric	978.02	020.20	23	53.93	0.35
Total Phosphate, Alka. Quimociac	955.04d	020.30	1	53.34	0.00
Total Phosphate, ICP	970.03	020.40	5	53.94	0.89
Method Group 020.XX PCT			30	53.93	0.48
<b>INSOLUBLE PHOSPHATE</b>					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	12	0.75	0.27
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.87	0.00
Insoluble Phosphate, Automated	978.01	030.40	2	0.66	0.09
Insoluble Phosphate, Other		030.99	2	1.23	0.01
Method Group 030.XX PCT			17	0.78	0.33
<b>INDIRECT AVAILABLE PHOSPHATE</b>					
Indirect Available Phosphate, Spectrometric	960.02	040.20	14	53.03	0.23
Indirect Available Phosphate, Automated	960.02	040.40	1	53.40	0.00
Indirect Available Phosphate, Other		040.99	3	52.81	0.19
Method Group 040.XX PCT			18	53.03	0.36
<b>DIRECT AVAILABLE PHOSPHATE</b>					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	3	52.87	0.52
Direct Available Phosphate, Automated	978.01	041.40	3	53.27	0.99
Direct Available Phosphate, ICP		041.50	3	52.30	0.69
Direct Available Phosphate, EDTA Extract	993.01	041.60	5	52.49	0.76
Direct Available Phosphate, Other		041.99	2	52.76	0.17
Method Group 041.XX PCT			16	52.74	0.82
<b>WATER SOLUBLE PHOSPHATE</b>					
Water Soluble Phosphate, Spectrometric	970.01	048.20	14	48.43	0.27
Water Soluble Phosphate, Alka. Quimociac	964.04	048.30	1	47.47	0.00
Water Soluble Phosphate, Other		048.99	4	48.90	0.68
Method Group 048.XX PCT			19	48.43	0.49
<b>SOLUBLE POTASH AS K<sub>2</sub>O</b>					
Soluble Potash, ICP(Oxalate)		050.50	3	0.17	0.03
Soluble Potash, ICP(Citrate)		050.51	5	0.17	0.05
Soluble Potash, Other		050.99	9	0.17	0.01
Method Group 050.XX PCT			17	0.17	0.00
<b>FREE WATER</b>					
Free Water, Vacuum Oven	965.08B	060.00	18	0.64	0.17
Free Water, Vacuum Desiccate	965.08A	060.10	2	0.52	0.02
Free Water, Other		060.99	2	0.59	0.01
Method Group 060.XX PCT			22	0.60	0.15
<b>ACID SOLUBLE CALCIUM AS CaO</b>					
Acid Soluble Calcium, ICP		101.30	18	0.38	0.04
Method Group 101.XX PCT			18	0.38	0.05
<b>ACID SOLUBLE MAGNESIUM AS MgO</b>					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	0.65	0.00
Acid Soluble Magnesium, ICP		121.30	18	0.95	0.04
Method Group 121.XX PCT			19	0.95	0.06
<b>SULFATE SULFUR (S)</b>					
Sulfur, Gravimetric	980.02(a)	144.01	1	1.47	0.00

Sulfur, Spectrometric	144.70	2	2.42	0.00
Sulfur, Other	144.99	12	1.47	0.03
Method Group 144.XX PCT		15	1.48	0.04
<b>TOTAL SULFUR (S)</b>				
Sulfur, Other	145.99	4	1.46	0.05
Method Group 145.XX PCT		4	1.46	0.06
<b>TOTAL ARSENIC</b>				
Total Arsenic, ICP	980.02(b) 151.02	10	12	2.6
Total Arsenic, Other	151.99	2	11	0.1
Method Group 151.XX PPM		12	12	2.2
<b>ACID SOLUBLE BORON</b>				
Acid Soluble Boron, Other	165.99	1	35	0.0
Method Group 165.XX PPM		1	35	0.0
<b>TOTAL CADMIUM</b>				
Total Cadmium, ICP	181.30	13	4	0.3
Total Cadmium, Other	181.99	1	4	0.0
Method Group 181.XX PPM		14	4	0.3
<b>ALUMINUM AS Al<sub>2</sub>O<sub>3</sub></b>				
ICP, %		18	1.97	0.09
Water Soluble Chlorine, Other, %	190.99	1	1.92	0.00
Method Group 190.XX PCT		19	1.96	0.10
<b>TOTAL CHROMIUM</b>				
Total Chromium, ICP	191.30	10	96	5.2
Total Chromium, Other	191.99	2	100	2.2
Method Group 191.XX PPM		12	97	6.7
<b>ACID SOLUBLE COBALT</b>				
Acid Soluble Cobalt, ICP	202.30	10	3	0.5
Acid Soluble Cobalt, Other	202.99	1	3	0.0
Method Group 202.XX PPM		11	3	0.6
<b>ACID SOLUBLE COPPER</b>				
Acid Soluble Copper, ICP	221.30	5	3	2.6
Acid Soluble Copper, Other	221.99	1	0	0.0
Method Group 221.XX PPM		6	2	2.9
<b>ACID SOLUBLE IRON AS Fe<sub>2</sub>O<sub>3</sub></b>				
Acid Soluble Iron, ICP	241.30	18	1.24	0.07
Method Group 241.XX PCT		18	1.24	0.09
<b>TOTAL LEAD</b>				
Total Lead, ICP	251.30	7	1	1.3
Total Lead, Other	251.99	1	1	0.0
Method Group 251.XX PPM		8	1	1.5
<b>ACID SOLUBLE MANGANESE</b>				
Acid Soluble Manganese, ICP	972.02a 261.30	4	495	15.7
Acid Soluble Manganese, ICP	972.02b 261.31	2	485	0.6
Acid Soluble Manganese, Other	261.99	5	505	22.8
Method Group 261.XX PPM		11	496	18.9
<b>TOTAL MOLYBDENUM</b>				
Total Molybdenum, ICP	289.30	10	24	2.2
Total Molybdenum, Other	289.99	1	22	0.0
Method Group 289.XX PPM		11	24	2.3
<b>TOTAL NICKEL</b>				
Total Nickel, ICP	291.30	9	15	1.5
Total Nickel, Other	291.99	1	17	0.0
Method Group 291.XX PPM		10	15	1.5
<b>TOTAL SELENIUM</b>				
Total Selenium, ICP	301.30	2	6	4.5
Method Group 301.XX PPM		2	6	5.4
<b>SODIUM AS Na<sub>2</sub>O</b>				
Sodium, Other	311.99	11	0.22	0.03
Method Group 311.XX PCT		11	0.22	0.04
<b>ACID SOLUBLE ZINC</b>				
Acid Soluble Zinc, ICP	321.30	14	315.1	17.3
Acid Soluble Zinc, Other	321.99	1	129.5	0.0

Method Group 321.XX PPM		15	314.5	22.0
<b>FLUORIDE</b>				
Volumetric	325.10	13	1.60	0.06
Distilled/Electrode	325.99	2	1.70	0.01
Method Group 325.XX PCT		15	1.62	0.09

001.99 Ammoniacal Nitrogen		
Lab		Other
140	11.59	-6.657
275	11.37	-2.853
79	11.28	-1.210
24	11.27	-1.124
34	11.27	-1.124
275	11.27	-1.124
<b>Std Dev</b>	<b>11.26</b>	<b>-1.000</b>
24	11.26	-0.951
32	11.21	0.000
61	11.21	0.000
<b>Median</b>	<b>11.21</b>	<b>0.000</b>
23	11.20	0.086
32	11.20	0.173
61	11.19	0.259
<b>Std Dev</b>	<b>11.15</b>	<b>1.000</b>
23	11.14	1.124
310	11.04	2.853
38	10.55	11.342

001.XX Ammoniacal Nitrogen		
Lab		Total Method
140	11.59	-6.657
275	11.37	-2.853
79	11.28	-1.210
24	11.27	-1.124
34	11.27	-1.124
275	11.27	-1.124
<b>Std Dev</b>	<b>11.26</b>	<b>-1.000</b>
24	11.26	-0.951
32	11.21	0.000
61	11.21	0.000
<b>Median</b>	<b>11.21</b>	<b>0.000</b>
23	11.20	0.086
32	11.20	0.173
61	11.19	0.259
<b>Std Dev</b>	<b>11.15</b>	<b>1.000</b>
23	11.14	1.124
310	11.04	2.853
38	10.55	11.342

010.11 Total Nitrogen		
Lab		Modified Comprehensive
32	11.21	-1.340
<b>Std Dev</b>	<b>11.20</b>	<b>-1.000</b>

219	11.30	-1.552
<b>Std Dev</b>	<b>11.28</b>	<b>-1.000</b>
43	11.25	0.000
<b>Median</b>	<b>11.25</b>	<b>0.000</b>
<b>Std Dev</b>	<b>11.21</b>	<b>1.000</b>
43	11.21	1.128

010.12 Total Nitrogen		
Lab		Salicylic
107	11.19	0.000
<b>Median</b>	<b>11.19</b>	<b>0.000</b>

010.60 Total Nitrogen		
Lab		Combustion
315	11.72	-4.409
219	11.38	-1.426
24	11.36	-1.297
<b>Std Dev</b>	<b>11.33</b>	<b>-1.000</b>
31	11.32	-0.908
47	11.31	-0.821
24	11.30	-0.778
80	11.30	-0.778
79	11.30	-0.735
103	11.26	-0.432
49	11.24	-0.259
29	11.22	-0.086
<b>Median</b>	<b>11.21</b>	<b>0.000</b>
77	11.20	0.086
64	11.20	0.117
137	11.15	0.519
111	11.15	0.519
14	11.15	0.562
66	11.15	0.562
9	11.14	0.605
14	11.13	0.735
<b>Std Dev</b>	<b>11.09</b>	<b>1.000</b>
63	11.04	1.470
99	11.01	1.772
110	10.75	3.977

010.99 Total Nitrogen		
Lab		Other
32	11.21	-1.340
<b>Std Dev</b>	<b>11.20</b>	<b>-1.000</b>

<b>Median</b>	<b>11.20</b>	<b>0.000</b>
<b>Std Dev</b>	<b>11.20</b>	<b>1.000</b>
32	11.20	1.340

010.XX Total Nitrogen		
Lab		Total Method
315	11.72	-4.563
219	11.38	-1.506
24	11.36	-1.373
<b>Std Dev</b>	<b>11.32</b>	<b>-1.000</b>
31	11.32	-0.975
47	11.31	-0.886
24	11.30	-0.842
80	11.30	-0.842
219	11.30	-0.842
79	11.30	-0.797
103	11.26	-0.487
43	11.25	-0.354
49	11.24	-0.310
29	11.22	-0.133
32	11.21	0.000
43	11.21	0.000
<b>Median</b>	<b>11.21</b>	<b>0.000</b>
77	11.20	0.044
64	11.20	0.075
32	11.20	0.089
107	11.19	0.133
137	11.15	0.487
111	11.15	0.487
14	11.15	0.532
66	11.15	0.532
9	11.14	0.576
14	11.13	0.709
<b>Std Dev</b>	<b>11.09</b>	<b>1.000</b>
63	11.04	1.462
99	11.01	1.772
110	10.75	4.031

020.10 Total Phosphate		
Lab		Gravimetric Quimociac
219	54.31	0.000
<b>Median</b>	<b>54.31</b>	<b>0.000</b>

020.20 Total Phosphate		
Lab		Spectrometric
110	54.60	-1.900
14	54.39	-1.290
99	54.38	-1.276
14	54.36	-1.205
<b>Std Dev</b>	<b>54.28</b>	<b>-1.000</b>
34	54.06	-0.369
32	54.04	-0.298
275	54.02	-0.255
32	54.01	-0.213
275	54.01	-0.213
9	53.95	-0.057
61	53.94	-0.014
23	53.93	0.000
<b>Median</b>	<b>53.93</b>	<b>0.000</b>
23	53.91	0.057
61	53.86	0.199
31	53.78	0.440
79	53.78	0.440
<b>Std Dev</b>	<b>53.58</b>	<b>1.000</b>
140	53.56	1.049
24	53.55	1.078
24	53.53	1.149
43	53.30	1.787
43	53.22	2.014
310	51.93	5.672
315	24.15	84.455

020.30 Total Phosphate		
Lab		Alka. Quimociac
111	53.34	0.000
<b>Median</b>	<b>53.34</b>	<b>0.000</b>

020.40 Total Phosphate		
Lab		Automated
38	55.59	-1.861
<b>Std Dev</b>	<b>54.83</b>	<b>-1.000</b>
219	54.12	-0.197
9	53.94	0.000
<b>Median</b>	<b>53.94</b>	<b>0.000</b>
<b>Std Dev</b>	<b>53.05</b>	<b>1.000</b>
137	52.93	1.143
111	52.27	1.881

020.XX Total Phosphate		
Lab	Total Method	
38	55.59	-4.257
110	54.60	-1.712
14	54.39	-1.160
99	54.38	-1.148
14	54.36	-1.084
<b>Std Dev</b>	<b>54.32</b>	<b>-1.000</b>
219	54.31	-0.968
219	54.12	-0.468
34	54.06	-0.327
32	54.04	-0.263
275	54.02	-0.224
32	54.01	-0.186
275	54.01	-0.186
9	53.95	-0.045
9	53.94	-0.019
61	53.94	-0.006
<b>Median</b>	<b>53.93</b>	<b>0.000</b>
23	53.93	0.006
23	53.91	0.058
61	53.86	0.186
31	53.78	0.404
79	53.78	0.404
140	53.56	0.955
24	53.55	0.981
<b>Std Dev</b>	<b>53.54</b>	<b>1.000</b>
24	53.53	1.045
111	53.34	1.520
43	53.30	1.622
43	53.22	1.827
137	52.93	2.584
111	52.27	4.264
310	51.93	5.136
315	24.15	76.380

  

030.20 Insoluble Phosphate		
Lab	Spectrometric	
43	1.23	-1.793
43	1.23	-1.793
<b>Std Dev</b>	<b>1.02</b>	<b>-1.000</b>
79	0.91	-0.587
23	0.87	-0.459

61	0.86	-0.422
23	0.78	-0.128
<b>Median</b>	<b>0.75</b>	<b>0.000</b>
61	0.71	0.128
24	0.67	0.294
24	0.52	0.844
140	0.51	0.863
<b>Std Dev</b>	<b>0.47</b>	<b>1.000</b>
14	0.45	1.101
14	0.44	1.120

  

030.30 Insoluble Phosphate		
Lab	Alka. Quimociac	
31	0.87	0.000
<b>Median</b>	<b>0.87</b>	<b>0.000</b>

  

030.40 Insoluble Phosphate		
Lab	Automated	
34	0.78	-1.340
<b>Std Dev</b>	<b>0.75</b>	<b>-1.000</b>
<b>Median</b>	<b>0.66</b>	<b>0.000</b>
<b>Std Dev</b>	<b>0.57</b>	<b>1.000</b>
9	0.54	1.340

  

030.99 Insoluble Phosphate		
Lab	Other	
32	1.24	-1.340
<b>Std Dev</b>	<b>1.24</b>	<b>-1.000</b>
<b>Median</b>	<b>1.23</b>	<b>0.000</b>
<b>Std Dev</b>	<b>1.23</b>	<b>1.000</b>
32	1.23	1.340

  

030.XX Insoluble Phosphate		
Lab	Total Method	
32	1.24	-1.689
43	1.23	-1.665
43	1.23	-1.665
32	1.23	-1.634
<b>Std Dev</b>	<b>1.05</b>	<b>-1.000</b>
79	0.91	-0.459
23	0.87	-0.330
31	0.87	-0.312
61	0.86	-0.294
23	0.78	0.000

34	0.78	0.000
<b>Median</b>	<b>0.78</b>	<b>0.000</b>
61	0.71	0.257
24	0.67	0.422
9	0.54	0.881
24	0.52	0.973
140	0.51	0.991
<b>Std Dev</b>	<b>0.51</b>	<b>1.000</b>
14	0.45	1.230
14	0.44	1.248

  

040.20 Indirect Available Phosphate		
Lab	Spectrometric	
14	53.94	-3.934
14	53.92	-3.825
9	53.41	-1.643
<b>Std Dev</b>	<b>53.26</b>	<b>-1.000</b>
61	53.23	-0.843
23	53.13	-0.432
23	53.06	-0.130
140	53.05	-0.086
<b>Median</b>	<b>53.03</b>	<b>0.000</b>
24	53.01	0.086
61	53.00	0.130
31	52.91	0.519
24	52.89	0.627
79	52.87	0.692
<b>Std Dev</b>	<b>52.80</b>	<b>1.000</b>
43	52.07	4.150
43	51.99	4.511

  

040.40 Indirect Available Phosphate		
Lab	Automated	
9	53.40	0.000
<b>Median</b>	<b>53.40</b>	<b>0.000</b>

  

040.99 Indirect Available Phosphate		
Lab	Other	
34	53.28	-2.446
<b>Std Dev</b>	<b>53.00</b>	<b>-1.000</b>
32	52.81	0.000
<b>Median</b>	<b>52.81</b>	<b>0.000</b>
32	52.77	0.234

040.XX Indirect Available Phosphate		
Lab	Total Method	
14	53.94	-3.107
14	53.92	-3.021
9	53.41	-1.297
9	53.40	-1.263
<b>Std Dev</b>	<b>53.32</b>	<b>-1.000</b>
34	53.28	-0.854
61	53.23	-0.666
23	53.13	-0.341
23	53.06	-0.102
140	53.05	-0.068
<b>Median</b>	<b>53.03</b>	<b>0.000</b>
24	53.01	0.068
61	53.00	0.102
31	52.91	0.410
24	52.89	0.495
79	52.87	0.546
32	52.81	0.751
32	52.77	0.905
<b>Std Dev</b>	<b>52.74</b>	<b>1.000</b>
43	52.07	3.277
43	51.99	3.563

  

041.10 Direct Available Phosphate		
Lab	Gravimetric Quimociac	
219	54.02	-2.209
<b>Std Dev</b>	<b>53.39</b>	<b>-1.000</b>
107	52.87	0.000
<b>Median</b>	<b>52.87</b>	<b>0.000</b>
47	52.63	0.471

  

041.40 Direct Available Phosphate		
Lab	Automated	
38	55.50	-2.251
<b>Std Dev</b>	<b>54.26</b>	<b>-1.000</b>
49	53.27	0.000
<b>Median</b>	<b>53.27</b>	<b>0.000</b>
103	52.85	0.429

  

041.50 Direct Available Phosphate		
Lab	ICP	
47	52.41	-0.158
63	52.30	0.000

Median	52.30	0.000
Std Dev	51.61	1.000
80	50.55	2.522

041.60 Direct Available Phosphate		
Lab	EDTA Extract	
219	53.61	-1.476
29	53.41	-1.220
Std Dev	53.25	-1.000
77	52.49	0.000
Median	52.49	0.000
64	52.40	0.120
137	51.86	0.834

041.99 Direct Available Phosphate		
Lab	Other	
275	52.99	-1.340
Std Dev	52.93	-1.000
Median	52.76	0.000
Std Dev	52.59	1.000
275	52.54	1.340

041.XX Direct Available Phosphate		
Lab	Total Method	
38	55.50	-4.129
219	54.02	-1.917
219	53.61	-1.298
29	53.41	-1.009
Std Dev	53.41	-1.000
49	53.27	-0.798
275	52.99	-0.373
107	52.87	-0.201
103	52.85	-0.164
Median	52.74	0.000
47	52.63	0.164
275	52.54	0.298
77	52.49	0.366
47	52.41	0.485
64	52.40	0.501
63	52.30	0.649
Std Dev	52.06	1.000
137	51.86	1.306
80	50.55	3.260

048.20 Water Soluble Phosphate		
Lab	Spectrometric	
14	49.00	-2.163
14	48.90	-1.768
Std Dev	48.69	-1.000
61	48.68	-0.940
31	48.58	-0.583
79	48.55	-0.470
61	48.47	-0.169
23	48.43	-0.019
Median	48.43	0.000
23	48.42	0.019
275	48.32	0.414
9	48.28	0.545
140	48.20	0.865
Std Dev	48.16	1.000
24	47.97	1.730
24	47.75	2.558
43	47.74	2.595

048.30 Water Soluble Phosphate		
Lab	Alka. Quimociac	
111	47.47	0.000
Median	47.47	0.000

048.99 Water Soluble Phosphate		
Lab	Other	
32	49.30	-0.599
32	49.28	-0.570
Median	48.90	0.000
34	48.51	0.570
Std Dev	48.22	1.000
111	47.99	1.343

048.XX Water Soluble Phosphate		
Lab	Total Method	
32	49.30	-2.173
32	49.28	-2.123
14	49.00	-1.424
14	48.90	-1.161
Std Dev	48.83	-1.000
61	48.68	-0.612
31	48.58	-0.375
79	48.55	-0.300

34	48.51	-0.200
61	48.47	-0.100
23	48.43	0.000
Median	48.43	0.000
23	48.42	0.025
275	48.32	0.287
9	48.28	0.375
140	48.20	0.587
Std Dev	48.03	1.000
111	47.99	1.106
24	47.97	1.161
24	47.75	1.711
43	47.74	1.736
111	47.47	2.410

050.50 %K <sub>2</sub> O Soluble Potash		
Lab	ICP(Oxalate)	
23	0.17	0.000
23	0.17	0.000
Median	0.17	0.000
Std Dev	0.14	1.000
99	0.08	2.680

050.51 %K <sub>2</sub> O Soluble Potash		
Lab	ICP(Citrate)	
275	0.24	-1.340
275	0.24	-1.340
Std Dev	0.22	-1.000
18	0.17	0.000
18	0.17	0.000
137	0.17	0.000
Median	0.17	0.000

050.99 Soluble Potash		
Lab	%K <sub>2</sub> O	Other
61	0.19	-1.657
Std Dev	0.18	-1.000
61	0.18	-0.766
43	0.18	-0.322
43	0.17	-0.279
111	0.17	0.000
Median	0.17	0.000
31	0.17	0.126
Std Dev	0.16	1.000

24	0.16	1.018
24	0.15	1.909
80	0.10	6.368

050.XX Soluble Potash		
Lab	%K <sub>2</sub> O	Total Method
275	0.24	-17.322
275	0.24	-17.322
61	0.19	-5.330
61	0.18	-2.665
43	0.18	-1.340
43	0.17	-1.212
Std Dev	0.17	-1.000
111	0.17	-0.377
18	0.17	0.000
18	0.17	0.000
23	0.17	0.000
23	0.17	0.000
31	0.17	0.000
137	0.17	0.000
Median	0.17	0.000
Std Dev	0.17	1.000
24	0.16	2.665
24	0.15	5.330
80	0.10	18.654
99	0.08	23.984

060.00 Free Water		
Lab	Vacuum Oven	
315	1.14	-2.942
14	1.00	-2.127
14	0.99	-2.039
31	0.89	-1.457
24	0.82	-1.078
Std Dev	0.81	-1.000
24	0.74	-0.612
32	0.72	-0.495
79	0.70	-0.379
310	0.65	-0.087
Median	0.64	0.000
32	0.62	0.087
23	0.61	0.146
111	0.59	0.291
23	0.57	0.379

140	0.57	0.379
9	0.57	0.379
34	0.51	0.728
43	0.50	0.787
43	0.50	0.816

060.10 Free Water		
Lab	Vacuum Desiccate	
61	0.54	-1.340
Std Dev	0.53	-1.000
Median	0.52	0.000
Std Dev	0.50	1.000
61	0.50	1.340

060.99 Free Water		
Lab	Other	
275	0.60	-1.340
Std Dev	0.59	-1.000
Median	0.59	0.000
Std Dev	0.58	1.000
275	0.58	1.340

060.XX Free Water		
Lab	Total Method	
315	1.14	-4.365
14	1.00	-3.228
14	0.99	-3.106
31	0.89	-2.294
24	0.82	-1.766
24	0.74	-1.117
Std Dev	0.73	-1.000
32	0.72	-0.954
79	0.70	-0.792
310	0.65	-0.386
32	0.62	-0.142
23	0.61	-0.061
Median	0.60	0.000
275	0.60	0.061
111	0.59	0.142
275	0.58	0.183
23	0.57	0.264
140	0.57	0.264
9	0.57	0.264
61	0.54	0.508

34	0.51	0.751
43	0.50	0.832
43	0.50	0.873
61	0.50	0.873

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
14	0.67	-7.263
14	0.64	-6.511
34	0.44	-1.503
Std Dev	0.42	-1.000
32	0.41	-0.751
32	0.40	-0.501
61	0.40	-0.501
23	0.39	-0.125
61	0.39	-0.125
9	0.38	0.000
23	0.38	0.000
24	0.38	0.000
24	0.38	0.000
Median	0.38	0.000
31	0.36	0.488
111	0.34	0.956
Std Dev	0.34	1.000
43	0.32	1.561
43	0.32	1.575
315	0.32	1.628
38	0.16	5.510

101.XX Acid Soluble Calcium		
Lab	%CaO	Total Method
14	0.67	-7.263
14	0.64	-6.511
34	0.44	-1.503
Std Dev	0.42	-1.000
32	0.41	-0.751
32	0.40	-0.501
61	0.40	-0.501
23	0.39	-0.125
61	0.39	-0.125
9	0.38	0.000
23	0.38	0.000
24	0.38	0.000
24	0.38	0.000

Median	0.38	0.000
31	0.36	0.488
111	0.34	0.956
Std Dev	0.34	1.000
43	0.32	1.561
43	0.32	1.575
315	0.32	1.628
38	0.16	5.510

121.00 Acid Soluble Magnesium		
Lab	%MgO	Atomic Absorption
219	0.65	0.000
Median	0.65	0.000

121.30 Acid Soluble Magnesium		
Lab	%MgO	ICP
14	1.48	-14.563
14	1.47	-14.425
Std Dev	0.98	-1.000
24	0.97	-0.687
32	0.97	-0.687
32	0.97	-0.550
34	0.96	-0.412
23	0.96	-0.275
24	0.95	-0.137
23	0.95	0.000
61	0.95	0.000
Median	0.95	0.000
61	0.94	0.137
315	0.93	0.412
9	0.92	0.687
111	0.91	0.871
Std Dev	0.91	1.000
31	0.89	1.511
43	0.84	3.022
43	0.83	3.297
38	0.38	15.524

121.XX Acid Soluble Magnesium		
Lab	%MgO	Total Method
14	1.48	-11.672
14	1.47	-11.562
Std Dev	0.99	-1.000
24	0.97	-0.551

32	0.97	-0.551
32	0.97	-0.440
34	0.96	-0.330
23	0.96	-0.220
24	0.95	-0.110
23	0.95	0.000
61	0.95	0.000
Median	0.95	0.000
61	0.94	0.110
315	0.93	0.330
9	0.92	0.551
111	0.91	0.698
Std Dev	0.90	1.000
31	0.89	1.211
43	0.84	2.423
43	0.83	2.643
219	0.65	6.486
38	0.38	12.443

144..01 Sulfate Sulfur (S)		
Lab	Gravimetric	
79	1.47	0.000
Median	1.47	0.000

144.70 Sulfur		
Lab	Spectrometric	
14	2.42	0.000
14	2.42	0.000
Median	2.42	0.000

144.99 Sulfate Sulfur (S)		
Lab	Other	
38	1.55	-2.648
32	1.52	-1.437
23	1.51	-1.265
23	1.51	-1.092
Std Dev	1.50	-1.000
34	1.49	-0.573
61	1.48	-0.054
Median	1.47	0.000
9	1.47	0.054
24	1.47	0.119
32	1.47	0.119
24	1.46	0.464

Std Dev	1.44	1.000
61	1.43	1.502
31	1.34	4.538

144.XX Sulfate Sulfur (S)		
Lab	Total Method	
14	2.42	-28.140
14	2.42	-28.140
38	1.55	-2.233
32	1.52	-1.191
23	1.51	-1.042
Std Dev	1.51	-1.000
23	1.51	-0.893
34	1.49	-0.447
61	1.48	0.000
Median	1.48	0.000
9	1.47	0.093
24	1.47	0.149
32	1.47	0.149
79	1.47	0.298
24	1.46	0.447
Std Dev	1.44	1.000
61	1.43	1.340
31	1.34	3.954

145.99 Total Sulfur (S)		
Lab	Other	
315	1.63	-3.453
Std Dev	1.51	-1.000
43	1.47	-0.052
Median	1.46	0.000
43	1.46	0.052
Std Dev	1.41	1.000
111	1.39	1.598

145.XX Total Sulfur (S)		
Lab	Total Method	
315	1.63	-3.453
Std Dev	1.51	-1.000
43	1.47	-0.052
Median	1.46	0.000
43	1.46	0.052
Std Dev	1.41	1.000
111	1.39	1.598

151.30 Total Arsenic		
Lab	ICP	
43	19.30	-2.732
43	19.10	-2.655
111	16.00	-1.471
Std Dev	14.77	-1.000
64	12.83	-0.259
24	12.40	-0.096
Median	12.15	0.000
18	11.90	0.096
9	11.85	0.115
18	11.65	0.191
Std Dev	9.53	1.000
31	8.65	1.337
315	8.30	1.471

151.99 Total Arsenic		
Lab	Other	
275	11.20	-1.340
Std Dev	11.17	-1.000
Median	11.10	0.000
Std Dev	11.03	1.000
275	11.00	1.340

151.XX Total Arsenic		
Lab	Total Method	
43	19.30	-4.026
43	19.10	-3.917
111	16.00	-2.237
Std Dev	13.72	-1.000
64	12.83	-0.517
24	12.40	-0.285
18	11.90	-0.014
Median	11.88	0.000
9	11.85	0.014
18	11.65	0.122
275	11.20	0.366
275	11.00	0.474
Std Dev	10.03	1.000
31	8.65	1.749
315	8.30	1.938

165.99 Acid Soluble Boron		
Lab	PPM	Other
24	35.30	0.000
Median	35.30	0.000

165.XX, ppm Acid Soluble Boron		
Lab	PPM	Total Method
24	35.30	0.000
Median	35.30	0.000

181.30 Total Cadmium		
Lab	PPM	ICP
111	22.50	-67.752
275	4.71	-2.530
275	4.68	-2.420
64	4.32	-1.083
Std Dev	4.29	-1.000
9	4.15	-0.477
43	4.09	-0.257
43	4.02	0.000
Median	4.02	0.000
61	4.00	0.073
61	4.00	0.073
18	3.95	0.257
18	3.90	0.440
315	3.79	0.843
Std Dev	3.75	1.000
31	2.75	4.656

181.99 Total Cadmium		
Lab	Other	
24	4.26	0.000
Median	4.26	0.000

181.XX Total Cadmium		
Lab	PPM	Total Method
111	22.50	-72.883
275	4.71	-2.588
275	4.68	-2.470
64	4.32	-1.029
Std Dev	4.31	-1.000
24	4.26	-0.810
9	4.15	-0.375
43	4.09	-0.138

Median		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Aluminum ICP
43	4.02	0.138
61	4.00	0.217
61	4.00	0.217
18	3.95	0.415
18	3.90	0.612
Std Dev	3.80	1.000
315	3.79	1.047
31	2.75	5.157

190.00 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	ICP
14	3.44	-16.301
14	3.42	-16.025
32	2.14	-1.879
32	2.13	-1.824
Std Dev	2.06	-1.000
9	2.04	-0.829
275	2.01	-0.497
275	2.00	-0.387
24	1.97	-0.055
34	1.97	-0.055
Median	1.97	0.000
24	1.96	0.055
23	1.95	0.166
23	1.95	0.221
61	1.92	0.553
315	1.91	0.608
61	1.90	0.718
Std Dev	1.87	1.000
43	1.82	1.602
43	1.82	1.658
111	1.43	5.963

190.99 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Atomic Absorption
31	1.92	0.000
Median	1.92	0.000

190.XX Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Total Method
14	3.44	-17.628
14	3.42	-17.331
32	2.14	-2.084



32	2.13	-2.025
Std Dev	2.04	-1.000
9	2.04	-0.953
275	2.01	-0.596
275	2.00	-0.476
24	1.97	-0.119
34	1.97	-0.119
24	1.96	0.000
Median	1.96	0.000
23	1.95	0.119
23	1.95	0.179
31	1.92	0.476
61	1.92	0.536
315	1.91	0.596
61	1.90	0.715
Std Dev	1.88	1.000
43	1.82	1.668
43	1.82	1.727
111	1.43	6.367

191.30	Total Chromium	
Lab	PPM	ICP
18	101.80	-1.077
Std Dev	101.40	-1.000
9	100.00	-0.732
61	98.50	-0.445
111	98.50	-0.445
61	97.00	-0.158
Median	96.18	0.000
31	95.35	0.158
43	91.50	0.895
43	91.50	0.895
Std Dev	90.95	1.000
315	83.52	2.423
38	43.04	10.172

191.99	Total Chromium	
Lab	PPM	Other
18	102.55	-1.340
Std Dev	101.80	-1.000
Median	99.58	0.000
Std Dev	97.35	1.000
24	96.60	1.340

191.XX	Total Chromium	
Lab	PPM	Total Method
18	102.55	-1.045
Std Dev	102.30	-1.000
18	101.80	-0.908
9	100.00	-0.581
61	98.50	-0.309
111	98.50	-0.309
61	97.00	-0.036
Median	96.80	0.000
24	96.60	0.036
31	95.35	0.263
43	91.50	0.963
43	91.50	0.963
Std Dev	91.30	1.000
315	83.52	2.413
38	43.04	9.768

202.30	Acid Soluble Cobalt	
Lab	PPM	ICP
111	15.00	-21.760
Std Dev	3.69	-1.000
202.99	Acid Soluble Cobalt	
Lab	Other	
24	3.08	0.000
Median	3.08	0.000

202.XX	Acid Soluble Cobalt	
Lab	PPM	Total Method
111	15.00	-22.475
61	4.00	-1.700
9	3.75	-1.228
64	3.67	-1.075
Std Dev	3.63	-1.000
18	3.20	-0.189
18	3.10	0.000
Median	3.10	0.000
24	3.08	0.038
43	3.00	0.189
43	3.00	0.189
61	3.00	0.189
Std Dev	2.57	1.000
31	2.13	1.841

221.30	Acid Soluble Copper	
Lab	PPM	ICP
31	<1	0.000
61	<0.4	0.000
61	<0.4	0.000
111	11.00	-3.010
Std Dev	5.82	-1.000
18	4.45	-0.466
18	3.25	0.000
Median	3.25	0.000
43	1.00	0.874
43	1.00	0.874

221.99	Acid Soluble Copper	
Lab	Other	
24	0.47	0.000
Median	0.47	0.000

221.XX	Acid Soluble Copper	
Lab	PPM	Total Method
31	<1	0.000
61	<0.4	0.000
61	<0.4	0.000
111	11.00	-3.775
Std Dev	4.48	-1.000
18	4.45	-0.989
18	3.25	-0.479
Median	2.13	0.000
43	1.00	0.479
43	1.00	0.479
24	0.47	0.704

241.30	Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	ICP
14	2.04	-11.420
14	2.03	-11.278
32	1.35	-1.530
32	1.35	-1.530
Std Dev	1.31	-1.000
111	1.30	-0.874
24	1.26	-0.320
34	1.26	-0.320
24	1.25	-0.178
24	1.25	-0.178
23	1.24	-0.036

Median	1.24	0.000
23	1.24	0.036
9	1.21	0.391
31	1.20	0.605
43	1.20	0.605
61	1.20	0.605
43	1.19	0.676
61	1.18	0.818
Std Dev	1.17	1.000
315	1.12	1.743
38	0.53	10.068

241.XX	Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Total Method
14	2.04	-11.420
14	2.03	-11.278
32	1.35	-1.530
32	1.35	-1.530
Std Dev	1.31	-1.000
111	1.30	-0.874
24	1.26	-0.320
34	1.26	-0.320
24	1.25	-0.178
23	1.24	-0.036
Median	1.24	0.000
23	1.24	0.036
9	1.21	0.391
31	1.20	0.605
43	1.20	0.605
61	1.20	0.605
43	1.19	0.676
61	1.18	0.818
Std Dev	1.17	1.000
315	1.12	1.743
38	0.53	10.068

251.30	Total Lead	
Lab	PPM	ICP
275	<1	0.000
275	<1	0.000
111	8.00	-5.302
43	2.80	-1.262
43	2.75	-1.223
Std Dev	2.46	-1.000

315	1.18	0.000
Median	1.18	0.000
31	1.10	0.058
61	1.00	0.136
61	1.00	0.136

251.99	Total Lead	
Lab	PPM	Total Method
24	1.23	0.000
Median	1.23	0.000

251.XX	Total Lead	
Lab	PPM	Total Method
275	<1	0.000
275	<1	0.000
111	8.00	-5.398
43	2.80	-1.269
43	2.75	-1.229
Std Dev	2.46	-1.000
24	1.23	-0.022
Median	1.20	0.000
315	1.18	0.022
31	1.10	0.081
61	1.00	0.161
61	1.00	0.161

261.30	Acid Soluble Manganese	
Lab	PPM	ICP
9	509.50	-0.915
315	503.00	-0.501
Median	495.13	0.000
31	487.25	0.501
Std Dev	479.41	1.000
111	472.50	1.439

261.31	Acid Soluble Manganese	
Lab	PPM	ICP
18	485.70	-1.340
Std Dev	485.50	-1.000
Median	484.90	0.000
Std Dev	484.30	1.000
18	484.10	1.340

261.99	Acid Soluble Manganese	
Lab	PPM	Other
43	526.50	-0.945
43	526.00	-0.923
61	505.00	0.000
Median	505.00	0.000
61	495.50	0.417
24	493.00	0.527

261.XX	Acid Soluble Manganese	
Lab	PPM	Total Method
43	526.50	-2.000
43	526.00	-1.967
Std Dev	511.00	-1.000
9	509.50	-0.903
61	505.00	-0.613
315	503.00	-0.484
61	495.50	0.000
Median	495.50	0.000
24	493.00	0.161
31	487.25	0.532
18	485.70	0.632
18	484.10	0.735
Std Dev	480.00	1.000
111	472.50	1.484

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
111		

289.99	Total Molybdenum	
Lab	PPM	Other
24	22.00	0.000
Median	22.00	0.000

289.XX	Total Molybdenum	
Lab	PPM	Total Method
111	31.50	-4.266
18	26.80	-1.760
18	26.05	-1.360
Std Dev	25.38	-1.000
64	23.98	-0.254
9	23.55	-0.027
61	23.50	0.000
Median	23.50	0.000
43	22.65	0.453
43	22.50	0.533
61	22.50	0.533
24	22.00	0.800
Std Dev	21.62	1.000
31	14.90	4.586

291.30	Total Nickel	
Lab	PPM	ICP
9	16.00	-0.963
61	15.00	-0.293
61	15.00	-0.293
18	14.70	-0.092
64	14.56	0.000
Median	14.56	0.000
18		

291.99	Total Nickel	
Lab	PPM	Other
24	16.70	0.000
Median	16.70	0.000

291.XX	Total Nickel	
Lab	PPM	Total Method
24	16.70	-1.680
9	16.00	-1.112
Std Dev	15.86	-1.000
61	15.00	-0.299
61	15.00	-0.299
18	14.70	-0.056

301.30	Total Selenium	
Lab	PPM	ICP
111	12.00	-1.340
Std Dev	10.49	-1.000

Median	6.03	0.000
Std Dev	1.57	1.000
24	0.06	1.340

301.XX	Total Selenium	
Lab	PPM	Total Method
111	12.00	-1.340
Std Dev	10.49	-1.000
Median	6.03	0.000
Std Dev	1.57	1.000
24	0.06	1.340

311.99	Sodium	
Lab	%Na <sub>2</sub> O	Other
23	0.24	-0.645
61	0.24	-0.645
24	0.23	-0.484
23	0.23	-0.484
24	0.22	-0.161
31	0.22	0.000
61	0.22	0.000
Median	0.22	0.000
43	0.19	0.853
111	0.19	0.860
43	0.19	0.863
Std Dev	0.18	1.000
315	0.18	1.290

311.XX	Sodium	
Lab	%Na <sub>2</sub> O	Total Method
23	0.24	-0.645
61	0.24	-0.645
24	0.23	-0.484
23	0.23	-0.484
24	0.22	-0.161
31	0.22	0.000
61	0.22	0.000
Median	0.22	0.000
43	0.19	0.853
111	0.19	0.860
43	0.19	0.863
Std Dev	0.18	1.000
315	0.18	1.290

321.30 Acid Soluble Zinc		
Lab	PPM	ICP
111	600.00	-16.478
315	332.50	-1.008
Std Dev	332.36	-1.000
9	332.00	-0.979
275	331.79	-0.967
275	327.28	-0.706
31	323.25	-0.473
64	315.64	-0.033
Median	315.07	0.000
61	314.50	0.033
61	314.50	0.033
24	310.00	0.293
18	306.65	0.487
18	304.05	0.637
43	303.00	0.698
43	301.50	0.785

321.99 Acid Soluble Zinc		
Lab		Other
38	129.47	0.000
Median	129.47	0.000

321.XX Acid Soluble Zinc		
Lab	PPM	Total Method
111	600.00	-15.822
Std Dev	332.54	-1.000
315	332.50	-0.998
9	332.00	-0.970
275	331.79	-0.958
275	327.28	-0.708
31	323.25	-0.485
64	315.64	-0.063
61	314.50	0.000
61	314.50	0.000
Median	314.50	0.000
24	310.00	0.249
18	306.65	0.435
18	304.05	0.579
43	303.00	0.637
43	301.50	0.720
Std Dev	296.46	1.000
38	129.47	10.254

325.10 Fluoride		
Lab	%	Electrode
32	1.69	-1.519
32	1.69	-1.519
23	1.68	-1.340
23	1.66	-0.983
79	1.65	-0.804
24	1.62	-0.357
14	1.60	0.000
14	1.60	0.000
Median	1.60	0.000
34	1.59	0.179
24	1.58	0.357
9	1.56	0.715
31	1.55	0.983
111	1.52	1.519

325.99 Fluoride		
Lab	%	Other
61	1.71	-1.340
Median	1.70	0.000
61	1.70	1.340

325.XX Fluoride		
Lab	%	Total Method
61	1.71	-1.269
61	1.70	-1.058
32	1.69	-0.917
32	1.69	-0.917
23	1.68	-0.776
23	1.66	-0.494
79	1.65	-0.353
24	1.62	0.000
Median	1.62	0.000
14	1.60	0.282
14	1.60	0.282
34	1.59	0.423
24	1.58	0.564
9	1.56	0.846
31	1.55	1.058
111	1.52	1.481