

## AFPC

Sample

2018-06

Grade

11-52-0

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
<b>AMMONIACAL NITROGEN</b>					
Ammoniacal Nitrogen, MgO distillation	920.03	001.10	1	11.28	0.00
Ammoniacal Nitrogen, Other		001.99	10	11.25	0.03
Method Group 001.XX PCT			11	11.26	0.05
<b>TOTAL NITROGEN</b>					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	11.34	0.01
Total Nitrogen, Combustion	993.13	010.60	21	11.17	0.18
Total Nitrogen, Other		010.99	5	11.26	0.01
Method Group 010.XX PCT			29	11.24	0.21
<b>TOTAL PHOSPHATE</b>					
Total Phosphate, Gravimetric Quimociac		020.10	1	53.29	0.00
Total Phosphate, Spectrometric	978.02	020.20	20	52.67	0.34
Total Phosphate, ICP	970.03	020.40	2	52.67	0.10
Total Phosphate, Other	993.13	020.99	1	52.75	0.00
Method Group 020.XX PCT			24	52.69	0.27
<b>INSOLUBLE PHOSPHATE</b>					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	8	0.20	0.82
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.11	0.00
Insoluble Phosphate, Automated	978.01	030.40	1	0.21	0.00
Insoluble Phosphate, Other		030.99	2	0.11	0.00
Method Group 030.XX PCT			12	0.17	0.09
<b>INDIRECT AVAILABLE PHOSPHATE</b>					
Indirect Available Phosphate, Spectrometric	960.02	040.20	9	52.54	0.39
Indirect Available Phosphate, Other		040.99	3	51.91	0.99
Method Group 040.XX PCT			12	52.29	0.64
<b>DIRECT AVAILABLE PHOSPHATE</b>					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	3	52.53	0.22
Direct Available Phosphate, Spectrometric	960.03D	041.20	2	52.40	0.07
Direct Available Phosphate, ICP		041.50	3	51.75	0.55
Direct Available Phosphate, EDTA Extract	993.01	041.60	6	52.44	0.71
Direct Available Phosphate, Other		041.99	1	52.61	0.00
Method Group 041.XX PCT			15	52.50	0.66
<b>WATER SOLUBLE PHOSPHATE</b>					
Water Soluble Phosphate, Spectrometric	970.01	048.20	13	47.69	0.28
Water Soluble Phosphate, ICP		048.50	1	47.88	0.00
Water Soluble Phosphate, Other		048.99	3	47.63	0.06
Method Group 048.XX PCT			17	47.66	0.28
<b>SOLUBLE POTASH AS K<sub>2</sub>O</b>					
Soluble Potash, ICP(Oxalate)		050.50	2	0.17	0.00
Soluble Potash, Other		050.99	8	0.17	0.01
Method Group 050.XX PCT			10	0.17	0.01
<b>FREE WATER</b>					
Free Water, Vacuum Oven	965.08B	060.00	13	1.35	0.12
Free Water, Other		060.99	5	1.97	1.58
Method Group 060.XX PCT			18	1.35	0.63
<b>ACID SOLUBLE CALCIUM AS CaO</b>					
Acid Soluble Calcium, Atomic Absorption	945.04	101.00	1	0.13	0.00
Acid Soluble Calcium, ICP		101.30	14	0.21	0.02
Acid Soluble Calcium, Other		101.99	1	0.14	0.00
Method Group 101.XX PCT			16	0.21	0.03
<b>ACID SOLUBLE MAGNESIUM AS MgO</b>					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	0.75	0.00
Acid Soluble Magnesium, ICP		121.30	12	1.01	0.04
Acid Soluble Magnesium, Other		121.99	3	0.89	0.11
Method Group 121.XX PCT			16	1.00	0.12

AFPC Check Sample 06-2018 **WATER SOLUBLE MAGNESIUM**

Water Soluble Magnesium, Other		131.99	1		0.00
Method Group 131.XX PCT			1	0.00	0.00
<b>SULFATE SULFUR (S)</b>					
Sulfur, Gravimetric	980.02(a)	144.01	1	1.67	0.00
Sulfur, Spectrometric		144.70	2	1.60	0.00
Sulfur, Other		144.99	9	1.63	0.01
Method Group 144.XX PCT			12	1.63	0.03
<b>TOTAL SULFUR (S)</b>					
Sulfur, Other		145.99	5	1.74	4.7
Method Group 145.XX PCT			5	1.74	5.7
<b>TOTAL ARSENIC</b>					
Total Arsenic, ICP	980.02(b)	151.02	5	10.4	3.4
Total Arsenic, Other		151.99	1	7.8	0.0
Method Group 151.XX PPM			6	10.4	4.5
<b>ACID SOLUBLE BORON</b>					
Acid Soluble Boron, Other		165.99	2	55	4.9
Method Group 165.XX PPM			2	55	6.0
<b>WATER SOLUBLE BORON</b>					
Water Soluble Boron, Other		171.99	1	4	0.0
Method Group 171.XX PPM			1	4	0.0
<b>TOTAL CADMIUM</b>					
Total Cadmium, Atomic Absorbtion		181.00	1	4	0.0
Total Cadmium, ICP		181.30	7	4.9	1.1
Total Cadmium, Other		181.99	2	3.9	1.1
Method Group 181.XX PPM			10	4.5	1.6
<b>ALUMINUM AS Al<sub>2</sub>O<sub>3</sub></b>					
ICP, %			14	1.61	0.07
Water Soluble Chlorine, Other, %		190.99	2	1.51	0.07
Method Group 190.XX PCT			16	1.61	0.07
<b>TOTAL CHROMIUM</b>					
Total Chromium, Atomic Absorbtion		191.00	1	63	0.0
Total Chromium, ICP		191.30	5	84	1.4
Total Chromium, Other		191.99	2	87	2.1
Method Group 191.XX PPM			8	84	2.8
<b>ACID SOLUBLE COBALT</b>					
Acid Soluble Cobalt, ICP		202.30	6	5	1.3
Acid Soluble Cobalt, Other		202.99	1	5	0.0
Method Group 202.XX PPM			7	5	1.5
<b>ACID SOLUBLE COPPER</b>					
Method Group 221.XX PPM			2	1.0	0.0
<b>ACID SOLUBLE IRON AS Fe<sub>2</sub>O<sub>3</sub></b>					
Acid Soluble Iron, ICP		241.30	14	1.76	0.04
Acid Soluble Iron, Other		241.99	3	1.49	0.25
Method Group 241.XX PCT			18	1.73	0.06
<b>TOTAL LEAD</b>					
Total Lead, ICP		251.30	5	1.1	0.1
Total Lead, Other		251.99	1	0.5	0.0
Method Group 251.XX PPM			6	1.0	0.1
<b>ACID SOLUBLE MANGANESE</b>					
Acid Soluble Manganese, ICP	972.02a	261.30	2	142	103.6
Acid Soluble Manganese, Other		261.99	7	330	15.5
Method Group 261.XX PPM			9	323	22.9
<b>WATER SOLUBLE MANGANESE</b>					
Water Soluble Manganese, Other		271.99	1	177	0
Method Group 271.XX PCT			1	177	0.0
<b>TOTAL MOLYBDENUM</b>					
Total Molybdenum, ICP		289.30	6	15	0.5
Total Molybdenum, Other		289.99	2	16	4.2
Method Group 289.XX PPM			8	15	2.8

<b>TOTAL NICKEL</b>					
Total Nickel, ICP	291.30		5	22.5	0.2
Total Nickel, icp	291.99		2	25.3	3.2
Method Group 291.XX PPM			7	22.5	0.8
<b>TOTAL SELENIUM</b>					
Total Selenium, ICP	301.30		3	0.2	0.3
Method Group 301.XX PPM			3	0.2	0.3
<b>SODIUM AS Na<sub>2</sub>O</b>					
Sodium, Atomic Absorbtion	983.04	311.00	1	0.48	0.00
Sodium, Other		311.99	8	0.18	0.02
Method Group 311.XX PCT			9	0.19	0.02
<b>ACID SOLUBLE ZINC</b>					
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	1	89.9	0.0
Acid Soluble Zinc, ICP		321.30	4	87.8	31.5
Acid Soluble Zinc, Other		321.99	5	89.0	14.0
Method Group 321.XX %			10	89.4	14.6
<b>FLUORIDE</b>					
Volumetric	325.10		11	1.79	0.13
Distilled/Electrode	325.99		2	1.79	0.05
Method Group 325.XX PCT			13	1.79	0.12

001.10 Ammoniacal Nitrogen		
Lab		MgO distillation
31	11.28	0.000
<b>Median</b>	<b>11.28</b>	<b>0.000</b>

001.99 Ammoniacal Nitrogen		
Lab		Other
38	11.38	-3.766
<b>Std Dev</b>	<b>11.28</b>	<b>-1.000</b>
275	11.28	-0.869
34	11.27	-0.435
79	11.27	-0.435
32	11.26	-0.145
<b>Median</b>	<b>11.25</b>	<b>0.000</b>
24	11.25	0.145
275	11.23	0.579
<b>Std Dev</b>	<b>11.22</b>	<b>1.000</b>
32	11.22	1.014
24	11.21	1.159
330	10.93	9.271

001.XX Ammoniacal Nitrogen		
Lab		Total Method
38	11.38	-3.350
<b>Std Dev</b>	<b>11.29</b>	<b>-1.000</b>
31	11.28	-0.670
275	11.28	-0.670
34	11.27	-0.268
79	11.27	-0.268
32	11.26	0.000
<b>Median</b>	<b>11.26</b>	<b>0.000</b>
24	11.25	0.268
275	11.23	0.670
<b>Std Dev</b>	<b>11.22</b>	<b>1.000</b>
32	11.22	1.072
24	11.21	1.206
330	10.93	8.710

010.11 Total Nitrogen		
Lab		Modified Comprehensive
43	11.34	0.000
219	11.34	0.000
<b>Median</b>	<b>11.34</b>	<b>0.000</b>
<b>Std Dev</b>	<b>11.33</b>	<b>1.000</b>

43 11.31 2.680

010.60 Total Nitrogen		
Lab		Combustion
49	11.52	-1.926
80	11.45	-1.563
66	11.43	-1.424
31	11.38	-1.145
110	11.35	-1.005
<b>Std Dev</b>	<b>11.35</b>	<b>-1.000</b>
219	11.34	-0.921
64	11.32	-0.810
79	11.24	-0.363
77	11.23	-0.307
47	11.22	-0.279
140	11.17	0.000
<b>Median</b>	<b>11.17</b>	<b>0.000</b>
24	11.16	0.084
14	11.11	0.363
29	11.10	0.391
38	11.10	0.391
14	11.10	0.419
103	11.10	0.419
24	11.06	0.614
63	11.03	0.782
111	11.00	0.949
<b>Std Dev</b>	<b>10.99</b>	<b>1.000</b>
99	10.97	1.145

010.99 Total Nitrogen		
Lab		Other
330	12.29	-69.345
<b>Std Dev</b>	<b>11.27</b>	<b>-1.000</b>
23	11.27	-0.670
32	11.26	0.000
<b>Median</b>	<b>11.26</b>	<b>0.000</b>
23	11.25	0.670
<b>Std Dev</b>	<b>11.24</b>	<b>1.000</b>
32	11.22	2.680

010.XX Total Nitrogen		
Lab		Total Method
330	12.29	-6.016
49	11.52	-1.597

80	11.45	-1.226
66	11.43	-1.083
<b>Std Dev</b>	<b>11.41</b>	<b>-1.000</b>
31	11.38	-0.798
110	11.35	-0.656
43	11.34	-0.570
219	11.34	-0.570
219	11.34	-0.570
64	11.32	-0.456
43	11.31	-0.428
23	11.27	-0.171
32	11.26	-0.114
23	11.25	-0.057
79	11.24	0.000
<b>Median</b>	<b>11.24</b>	<b>0.000</b>
77	11.23	0.057
47	11.22	0.086
32	11.22	0.114
140	11.17	0.371
24	11.16	0.456
14	11.11	0.741
29	11.10	0.770
38	11.10	0.770
14	11.10	0.798
103	11.10	0.798
24	11.06	0.998
<b>Std Dev</b>	<b>11.06</b>	<b>1.000</b>
63	11.03	1.169
111	11.00	1.340
99	10.97	1.540

020.10 Total Phosphate		
Lab		Gravimetric Quimociac
219	53.29	0.000
<b>Median</b>	<b>53.29</b>	<b>0.000</b>

020.20 Total Phosphate		
Lab		Spectrometric
24	52.95	-0.803
275	52.88	-0.613
24	52.84	-0.497
31	52.79	-0.351
14	52.78	-0.321
275	52.75	-0.234

111	52.74	-0.204
23	52.71	-0.102
34	52.70	-0.088
23	52.68	-0.029
<b>Median</b>	<b>52.67</b>	<b>0.000</b>
43	52.66	0.029
14	52.65	0.073
79	52.63	0.131
99	52.52	0.438
43	52.37	0.876
<b>Std Dev</b>	<b>52.33</b>	<b>1.000</b>
32	52.09	1.709
140	52.03	1.869
32	52.02	1.913
110	51.85	2.395
38	51.42	3.666

020.40 Total Phosphate		
Lab		Automated
111	52.81	-1.340
<b>Std Dev</b>	<b>52.77</b>	<b>-1.000</b>
<b>Median</b>	<b>52.67</b>	<b>0.000</b>
<b>Std Dev</b>	<b>52.56</b>	<b>1.000</b>
219	52.53	1.340

020.99 Total Phosphate		
Lab		Other
330	52.75	0.000
<b>Median</b>	<b>52.75</b>	<b>0.000</b>

020.XX Total Phosphate		
Lab		Total Method
219	53.29	-2.680
24	52.95	-1.139
<b>Std Dev</b>	<b>52.91</b>	<b>-1.000</b>
275	52.88	-0.849
24	52.84	-0.670
111	52.81	-0.514
31	52.79	-0.447
14	52.78	-0.402
275	52.75	-0.268
330	52.75	-0.268
111	52.74	-0.223
23	52.71	-0.067

34	52.70	-0.045
<b>Median</b>	<b>52.69</b>	<b>0.000</b>
23	52.68	0.045
43	52.66	0.134
14	52.65	0.201
79	52.63	0.290
219	52.53	0.715
99	52.52	-0.759
<b>Std Dev</b>	<b>52.47</b>	<b>1.000</b>
43	52.37	1.429
32	52.09	2.702
140	52.03	2.948
32	52.02	3.015
110	51.85	3.752
38	51.42	5.695

030.20		Insoluble Phosphate
Lab		Spectrometric
43	4.49	-5.232
43	4.26	-4.957
<b>Std Dev</b>	<b>1.02</b>	<b>-1.000</b>
23	0.24	-0.043
140	0.21	-0.006
<b>Median</b>	<b>0.20</b>	<b>0.000</b>
24	0.20	0.006
24	0.15	0.067
23	0.14	0.073
79	0.09	0.140

030.30		Insoluble Phosphate
Lab		Alka. Quimociac
31	0.11	0.000
<b>Median</b>	<b>0.11</b>	<b>0.000</b>

030.40		Insoluble Phosphate
Lab		Automated
34	0.21	0.000
<b>Median</b>	<b>0.21</b>	<b>0.000</b>

030.99		Insoluble Phosphate
Lab		Other
32	0.12	-1.340
<b>Std Dev</b>	<b>0.11</b>	<b>-1.000</b>
<b>Median</b>	<b>0.11</b>	<b>0.000</b>

<b>Std Dev</b>	<b>0.11</b>	<b>1.000</b>
32	0.11	1.340

030.XX		Insoluble Phosphate
Lab		Total Method
43	4.49	-56.411
43	4.26	-53.469
<b>Std Dev</b>	<b>0.25</b>	<b>-1.000</b>
23	0.24	-0.850
34	0.21	-0.523
140	0.21	-0.458
24	0.20	-0.327
<b>Median</b>	<b>0.17</b>	<b>0.000</b>
24	0.15	0.327
23	0.14	0.392
32	0.12	0.719
32	0.11	0.784
31	0.11	0.850
<b>Std Dev</b>	<b>0.09</b>	<b>1.000</b>
79	0.09	1.111

040.20		Indirect Available Phosphate
Lab		Spectrometric
24	52.80	-0.670
31	52.69	-0.374
24	52.65	-0.271
23	52.57	-0.064
79	52.54	0.000
<b>Median</b>	<b>52.54</b>	<b>0.000</b>
23	52.45	0.245
<b>Std Dev</b>	<b>52.15</b>	<b>1.000</b>
43	52.13	1.069
140	51.83	1.843
43	50.66	4.845

040.99		Indirect Available Phosphate
Lab		Other
32	51.97	-0.065
32	51.91	0.000
<b>Median</b>	<b>51.91</b>	<b>0.000</b>
<b>Std Dev</b>	<b>50.91</b>	<b>1.000</b>
34	49.31	2.615

040.XX		Indirect Available Phosphate
Lab		Total Method
24	52.80	-0.986
31	52.69	-0.766
24	52.65	-0.689
23	52.57	-0.536
79	52.54	-0.488
23	52.45	-0.306
<b>Median</b>	<b>52.29</b>	<b>0.000</b>
43	52.13	0.306
32	51.97	0.603
32	51.91	0.727
140	51.83	0.881
<b>Std Dev</b>	<b>51.76</b>	<b>1.000</b>
43	50.66	3.111
34	49.31	5.705

041.10		Direct Available Phosphate
Lab		Gravimetric Quimociac
107	52.56	-0.115
219	52.53	0.000
<b>Median</b>	<b>52.53</b>	<b>0.000</b>
<b>Std Dev</b>	<b>52.31</b>	<b>1.000</b>
47	51.97	2.565

041.20		Direct Available Phosphate
Lab		Spectrometric
38	52.50	-1.340
<b>Std Dev</b>	<b>52.47</b>	<b>-1.000</b>
<b>Median</b>	<b>52.40</b>	<b>0.000</b>
<b>Std Dev</b>	<b>52.33</b>	<b>1.000</b>
47	52.30	1.340

041.50		Direct Available Phosphate
Lab		ICP
63	52.64	-1.617
<b>Std Dev</b>	<b>52.30</b>	<b>-1.000</b>
80	51.75	0.000
<b>Median</b>	<b>51.75</b>	<b>0.000</b>
<b>Std Dev</b>	<b>51.20</b>	<b>1.000</b>
66	51.17	1.063

041.60		Direct Available Phosphate
Lab		EDTA Extract
63	52.64	-1.617
<b>Std Dev</b>	<b>52.30</b>	<b>-1.000</b>
80	51.75	0.000
<b>Median</b>	<b>51.75</b>	<b>0.000</b>
<b>Std Dev</b>	<b>51.20</b>	<b>1.000</b>
66	51.17	1.063

49	53.84	-1.963
<b>Std Dev</b>	<b>53.15</b>	<b>-1.000</b>
219	52.86	-0.584
77	52.80	-0.500
<b>Median</b>	<b>52.44</b>	<b>0.000</b>
64	52.09	0.500
29	51.82	0.870
<b>Std Dev</b>	<b>51.73</b>	<b>1.000</b>
103	50.67	2.491

041.99		Direct Available Phosphate
Lab		Other
79	52.61	0.000
<b>Median</b>	<b>52.61</b>	<b>0.000</b>

041.XX		Direct Available Phosphate
Lab		Total Method
49	53.84	-2.462
<b>Std Dev</b>	<b>53.04</b>	<b>-1.000</b>
219	52.86	-0.655
77	52.80	-0.544
63	52.64	-0.258
79	52.61	-0.194
107	52.56	-0.101
219	52.53	-0.055
38	52.50	0.000
<b>Median</b>	<b>52.50</b>	<b>0.000</b>
47	52.30	0.369
64	52.09	0.765
47	51.97	0.978
<b>Std Dev</b>	<b>51.96</b>	<b>1.000</b>
29	51.82	1.251
80	51.75	1.383
66	51.17	2.462
103	50.67	3.375

048.20		Water Soluble Phosphate
Lab		Spectrometric
330	48.28	-2.126
31	48.03	-1.215
23	47.98	-1.054
<b>Std Dev</b>	<b>47.96</b>	<b>-1.000</b>
111	47.82	-0.482
23	47.75	-0.214

14	47.69	-0.018
79	47.69	0.000
<b>Median</b>	<b>47.69</b>	<b>0.000</b>
43	47.64	0.161
14	47.57	0.411
43	47.45	0.858
<b>Std Dev</b>	<b>47.41</b>	<b>1.000</b>
24	47.29	1.429
24	47.20	1.733
140	47.12	2.019

048.50 Water Soluble Phosphate		
Lab		ICP
111	47.88	0.000
<b>Median</b>	<b>47.88</b>	<b>0.000</b>

048.99 Water Soluble Phosphate		
Lab		Other
32	47.66	-0.625
34	47.63	0.000
<b>Median</b>	<b>47.63</b>	<b>0.000</b>
<b>Std Dev</b>	<b>47.57</b>	<b>1.000</b>
32	47.51	2.055

048.XX Water Soluble Phosphate		
Lab		Total Method
330	48.28	-2.680
31	48.03	-1.578
23	47.98	-1.383
<b>Std Dev</b>	<b>47.89</b>	<b>-1.000</b>
111	47.88	-0.951
111	47.82	-0.692
23	47.75	-0.367
14	47.69	-0.130
79	47.69	-0.108
32	47.66	0.000
<b>Median</b>	<b>47.66</b>	<b>0.000</b>
43	47.64	0.086
34	47.63	0.151
14	47.57	0.389
32	47.51	0.648
43	47.45	0.929
<b>Std Dev</b>	<b>47.43</b>	<b>1.000</b>
24	47.29	1.621

24	47.20	1.988
140	47.12	2.334

050.50 %K <sub>2</sub> O Soluble Potash		
Lab		ICP(Oxalate)
23	0.17	0.000
23	0.17	0.000
<b>Median</b>	<b>0.17</b>	<b>0.000</b>

050.99 %K <sub>2</sub> O Soluble Potash		
Lab		Other
111	0.20	-2.162
<b>Std Dev</b>	<b>0.19</b>	<b>-1.000</b>
24	0.18	-0.522
24	0.18	-0.522
31	0.18	-0.112
<b>Median</b>	<b>0.17</b>	<b>0.000</b>
43	0.17	0.112
43	0.17	0.172
<b>Std Dev</b>	<b>0.16</b>	<b>1.000</b>
330	0.14	2.757
80	0.10	6.036

050.XX %K <sub>2</sub> O Soluble Potash		
Lab		Total Method
111	0.20	-4.304
24	0.18	-1.241
24	0.18	-1.241
<b>Std Dev</b>	<b>0.18</b>	<b>-1.000</b>
31	0.18	-0.475
43	0.17	-0.055
<b>Median</b>	<b>0.17</b>	<b>0.000</b>
43	0.17	0.055
23	0.17	0.291
23	0.17	0.291
<b>Std Dev</b>	<b>0.17</b>	<b>1.000</b>
330	0.14	4.885
80	0.10	11.011

060.00 Free Water		
Lab		Vacuum Oven
31	2.13	-6.335
24	1.92	-4.588
24	1.85	-4.020

<b>Std Dev</b>	<b>1.47</b>	<b>-1.000</b>
32	1.40	-0.365
32	1.40	-0.365
34	1.36	-0.041
140	1.35	0.000
<b>Median</b>	<b>1.35</b>	<b>0.000</b>
23	1.27	0.650
111	1.27	0.650
79	1.23	0.975
<b>Std Dev</b>	<b>1.23</b>	<b>1.000</b>
43	1.20	1.218
43	1.20	1.218
23	1.12	1.868

060.99 Free Water		
Lab		Other
14	2.99	-0.645
14	2.97	-0.635
330	1.97	0.000
<b>Median</b>	<b>1.97</b>	<b>0.000</b>
275	0.85	0.705
275	0.77	0.755

060.XX Free Water		
Lab		Total Method
14	2.99	-3.170
14	2.97	-3.141
31	2.13	-1.510
330	1.97	-1.189
24	1.92	-1.092
<b>Std Dev</b>	<b>1.87</b>	<b>-1.000</b>
24	1.85	-0.956
32	1.40	-0.083
32	1.40	-0.083
34	1.36	-0.005
<b>Median</b>	<b>1.35</b>	<b>0.000</b>
140	1.35	0.005
23	1.27	0.160
111	1.27	0.160
79	1.23	0.238
43	1.20	0.296
43	1.20	0.296
23	1.12	0.452
275	0.85	0.976

<b>Std Dev</b>	<b>0.84</b>	<b>1.000</b>
275	0.77	1.131

101.00 Acid Soluble Calcium		
Lab	%CaO	Atomic Absorption
219	0.13	0.000
<b>Median</b>	<b>0.13</b>	<b>0.000</b>

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
330	2.39	-89.522
32	0.25	-1.288
<b>Std Dev</b>	<b>0.24</b>	<b>-1.000</b>
32	0.24	-0.876
111	0.24	-0.876
24	0.23	-0.670
23	0.22	-0.258
24	0.22	-0.052
<b>Median</b>	<b>0.21</b>	<b>0.000</b>
31	0.21	0.052
23	0.21	0.155
34	0.21	0.361
14	0.20	0.567
43	0.20	0.673
43	0.20	0.708
14	0.20	0.773

101.99 Acid Soluble Calcium		
Lab	%CaO	Other
219	0.14	0.000
<b>Median</b>	<b>0.14</b>	<b>0.000</b>

101.XX Acid Soluble Calcium		
Lab	%CaO	Total Method
330	2.39	-85.589
32	0.25	-1.329
<b>Std Dev</b>	<b>0.24</b>	<b>-1.000</b>
32	0.24	-0.935
111	0.24	-0.935
24	0.23	-0.738
23	0.22	-0.345
24	0.22	-0.148
31	0.21	-0.049
<b>Median</b>	<b>0.21</b>	<b>0.000</b>

23	0.21	0.049
34	0.21	0.246
14	0.20	0.443
43	0.20	0.544
43	0.20	0.577
14	0.20	0.640
<b>Std Dev</b>	<b>0.19</b>	<b>1.000</b>
219	0.14	2.983
219	0.13	3.337

121.00 Acid Soluble Magnesium		
Lab	%MgO	Atomic Absorption
219	0.75	0.000
<b>Median</b>	<b>0.75</b>	<b>0.000</b>

121.30 Acid Soluble Magnesium		
Lab	%MgO	ICP
23	1.03	-0.638
24	1.03	-0.638
23	1.03	-0.510
32	1.03	-0.510
24	1.02	-0.383
34	1.01	-0.128
<b>Median</b>	<b>1.01</b>	<b>0.000</b>
32	1.00	0.128
31	1.00	0.255
14	0.98	0.766
<b>Std Dev</b>	<b>0.97</b>	<b>1.000</b>
14	0.97	1.021
43	0.89	2.935
43	0.87	3.573

121.99 Acid Soluble Magnesium		
Lab	%MgO	Other
111	1.01	-1.128
<b>Std Dev</b>	<b>0.99</b>	<b>-1.000</b>
219	0.89	0.000
<b>Median</b>	<b>0.89</b>	<b>0.000</b>
<b>Std Dev</b>	<b>0.78</b>	<b>1.000</b>
330	0.72	1.552

121.XX Acid Soluble Magnesium		
Lab	%MgO	Total Method
23	1.03	-0.329

24	1.03	-0.329
23	1.03	-0.278
32	1.03	-0.278
24	1.02	-0.228
34	1.01	-0.126
111	1.01	-0.076
32	1.00	-0.025
<b>Median</b>	<b>1.00</b>	<b>0.000</b>
31	1.00	0.025
14	0.98	0.228
14	0.97	0.329
<b>Std Dev</b>	<b>0.90</b>	<b>1.000</b>
43	0.89	1.087
219	0.89	1.138
43	0.87	1.340
219	0.75	2.493
330	0.72	2.806

144..01 Sulfate Sulfur (S)		
Lab		Gravimetric
79	1.67	0.000
<b>Median</b>	<b>1.67</b>	<b>0.000</b>

144.70 Sulfur		
Lab		Spectrometric
14	1.61	-1.340
<b>Std Dev</b>	<b>1.60</b>	<b>-1.000</b>
<b>Median</b>	<b>1.60</b>	<b>0.000</b>
<b>Std Dev</b>	<b>1.60</b>	<b>1.000</b>
14	1.60	1.340

144.99 Sulfate Sulfur (S)		
Lab		Other
330	14.64	#####
24	1.66	-3.536
<b>Std Dev</b>	<b>1.64</b>	<b>-1.000</b>
34	1.63	-0.161
23	1.63	0.000
24	1.63	0.000
<b>Median</b>	<b>1.63</b>	<b>0.000</b>
23	1.63	0.589
<b>Std Dev</b>	<b>1.62</b>	<b>1.000</b>
32	1.62	1.179
32	1.59	4.715

31	1.52	13.554
144.XX Sulfate Sulfur (S)		
Lab		Total Method
330	14.64	-483.995
79	1.67	-1.395
24	1.66	-1.209
<b>Std Dev</b>	<b>1.65</b>	<b>-1.000</b>
34	1.63	-0.144
23	1.63	-0.093
24	1.63	-0.093
<b>Median</b>	<b>1.63</b>	<b>0.000</b>
23	1.63	0.093
32	1.62	0.279
14	1.61	0.837
<b>Std Dev</b>	<b>1.60</b>	<b>1.000</b>
14	1.60	1.209
32	1.59	1.395
31	1.52	4.184

145.99 Total Sulfur (S)		
Lab		Other
63	10.07	-1.769
31	7.95	-1.319
<b>Std Dev</b>	<b>6.45</b>	<b>-1.000</b>
111	1.74	0.000
<b>Median</b>	<b>1.74</b>	<b>0.000</b>
43	1.64	0.021
43	1.60	0.030

145.XX Total Sulfur (S)		
Lab		Total Method
63	10.07	-1.769
31	7.95	-1.319
<b>Std Dev</b>	<b>6.45</b>	<b>-1.000</b>
111	1.74	0.000
<b>Median</b>	<b>1.74</b>	<b>0.000</b>
43	1.64	0.021
43	1.60	0.030

151.30 Total Arsenic		
Lab		ICP
43	15.00	-1.347
43	14.90	-1.318

<b>Std Dev</b>	<b>13.82</b>	<b>-1.000</b>
140	10.43	0.000
<b>Median</b>	<b>10.43</b>	<b>0.000</b>
64	10.35	0.022
24	8.34	0.616

151.99 Total Arsenic		
Lab		Other
18	7.80	0.000
<b>Median</b>	<b>7.80</b>	<b>0.000</b>

151.XX Total Arsenic		
Lab		Total Method
43	15.00	-1.251
43	14.90	-1.223
<b>Std Dev</b>	<b>14.08</b>	<b>-1.000</b>
140	10.43	-0.010
<b>Median</b>	<b>10.39</b>	<b>0.000</b>
64	10.35	0.010
24	8.34	0.556
18	7.80	0.702

165.99 Acid Soluble Boron		
Lab	PPM	Other
24	61.55	-1.340
<b>Std Dev</b>	<b>59.89</b>	<b>-1.000</b>
<b>Median</b>	<b>55.00</b>	<b>0.000</b>
<b>Std Dev</b>	<b>50.11</b>	<b>1.000</b>
330	48.45	1.340

165.XX, ppm Acid Soluble Boron		
Lab	PPM	Total Method
24	61.55	-1.340
<b>Std Dev</b>	<b>59.89</b>	<b>-1.000</b>
<b>Median</b>	<b>55.00</b>	<b>0.000</b>
<b>Std Dev</b>	<b>50.11</b>	<b>1.000</b>
330	48.45	1.340

171.99 Water Soluble Boron		
Lab	PPM	Other
330	4.35	0.000
<b>Median</b>	<b>4.35</b>	<b>0.000</b>

171.XX Water Soluble Boron		
Lab	PPM	Total Method
330	4.35	0.000
<b>Median</b>	<b>4.35</b>	<b>0.000</b>

181.00 Total Cadmium		
Lab	PPM	Atomic Absorbtion
330	3.50	0.000
<b>Median</b>	<b>3.50</b>	<b>0.000</b>

181.30 Total Cadmium		
Lab	PPM	ICP
43	5.52	-0.543
43	5.48	-0.502
18	5.10	-0.160
64	4.93	0.000
<b>Median</b>	<b>4.93</b>	<b>0.000</b>
275	4.00	0.845
<b>Std Dev</b>	<b>3.83</b>	<b>1.000</b>
275	3.64	1.173
111	2.00	2.671

181.99 Total Cadmium		
Lab	PPM	Other
24	5.39	-1.340
<b>Std Dev</b>	<b>5.01</b>	<b>-1.000</b>
<b>Median</b>	<b>3.92</b>	<b>0.000</b>
<b>Std Dev</b>	<b>2.82</b>	<b>1.000</b>
31	2.45	1.340

181.XX Total Cadmium		
Lab	PPM	Total Method
43	5.52	-0.797
43	5.48	-0.763
24	5.39	-0.695
18	5.10	-0.480
64	4.93	-0.348
<b>Median</b>	<b>4.46</b>	<b>0.000</b>
275	4.00	0.348
275	3.64	0.620
330	3.50	0.725
<b>Std Dev</b>	<b>3.14</b>	<b>1.000</b>
31	2.45	1.516
111	2.00	1.855

190.00 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	ICP
14	1.69	-1.143
24	1.69	-1.143
14	1.69	-1.072
24	1.69	-1.072
<b>Std Dev</b>	<b>1.68</b>	<b>-1.000</b>
34	1.63	-0.214
275	1.62	-0.143
23	1.61	0.000
32	1.61	0.000
<b>Median</b>	<b>1.61</b>	<b>0.000</b>
23	1.60	0.214
275	1.58	0.429
32	1.58	0.500
<b>Std Dev</b>	<b>1.54</b>	<b>1.000</b>
43	1.54	1.001
43	1.50	1.572
111	1.15	6.575

190.99 Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Atomic Absorbion
31	1.60	-1.340
<b>Std Dev</b>	<b>1.58</b>	<b>-1.000</b>
<b>Median</b>	<b>1.51</b>	<b>0.000</b>
<b>Std Dev</b>	<b>1.43</b>	<b>1.000</b>
330	1.41	1.340

190.XX Aluminum		
Lab	%Al <sub>2</sub> O <sub>3</sub>	Total Method
14	1.69	-1.544
24	1.69	-1.544
14	1.69	-1.454
24	1.69	-1.454
<b>Std Dev</b>	<b>1.66</b>	<b>-1.000</b>
34	1.63	-0.363
275	1.62	-0.273
23	1.61	-0.091
32	1.61	-0.091
<b>Median</b>	<b>1.61</b>	<b>0.000</b>
31	1.60	0.091
23	1.60	0.182
275	1.58	0.454

32	1.58	0.545
<b>Std Dev</b>	<b>1.55</b>	<b>1.000</b>
43	1.54	1.181
43	1.50	1.908
330	1.41	3.543
111	1.15	8.267

191.00 Total Chromium		
Lab	PPM	Atomic Absorbion
330	63.00	0.000
<b>Median</b>	<b>63.00</b>	<b>0.000</b>

191.30 Total Chromium		
Lab	PPM	ICP
18	94.15	-7.453
<b>Std Dev</b>	<b>85.36</b>	<b>-1.000</b>
64	84.83	-0.606
111	84.00	0.000
<b>Median</b>	<b>84.00</b>	<b>0.000</b>
43	83.00	0.734
43	83.00	0.734

191.99 Total Chromium		
Lab	PPM	Other
24	89.70	-1.340
<b>Std Dev</b>	<b>88.98</b>	<b>-1.000</b>
<b>Median</b>	<b>86.85</b>	<b>0.000</b>
<b>Std Dev</b>	<b>84.72</b>	<b>1.000</b>
31	84.00	1.340

191.XX Total Chromium		
Lab	PPM	Total Method
18	94.15	-4.469
24	89.70	-2.509
<b>Std Dev</b>	<b>86.27</b>	<b>-1.000</b>
64	84.83	-0.363
31	84.00	0.000
111	84.00	0.000
<b>Median</b>	<b>84.00</b>	<b>0.000</b>
43	83.00	0.440
43	83.00	0.440
<b>Std Dev</b>	<b>81.73</b>	<b>1.000</b>
330	63.00	9.245

202.30 Acid Soluble Cobalt		
Lab	PPM	ICP
64		

202.99 Acid Soluble Cobalt		
Lab	PPM	Other
24	5.24	0.000
<b>Median</b>	<b>5.24</b>	<b>0.000</b>

202.XX Acid Soluble Cobalt		
Lab	PPM	Total Method
24	5.24	-0.196
64	5.21	-0.175
43	5.00	0.000
43	5.00	0.000
<b>Median</b>	<b>5.00</b>	<b>0.000</b>
18	4.10	0.751
<b>Std Dev</b>	<b>3.80</b>	<b>1.000</b>
330	2.90	1.753
111	1.50	2.922

221.00 Acid Soluble Copper		
Lab	PPM	Atomic Absorbion
219	1.67	0.000
<b>Median</b>	<b>1.67</b>	<b>0.000</b>

221.30 Acid Soluble Copper		
Lab	PPM	ICP
43	1.00	0.000
43	1.00	0.000
<b>Median</b>	<b>1.00</b>	<b>0.000</b>

221.99 Acid Soluble Copper		
Lab	PPM	Other
24	<0.0001	0.000
<b>Median</b>	<b>0.00</b>	<b>0.000</b>

221.XX Acid Soluble Copper		
Lab	PPM	Total Method
24	<0.0001	0.000
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	
275	1.87	-2.744	
111	1.86	-2.361	
275	1.84	-1.978	
Std Dev	1.80	-1.000	
24	1.78	-0.447	
23	1.77	-0.191	
23	1.77	-0.064	
24	1.77	-0.064	
Median	1.76	0.000	
32	1.76	0.064	
43	1.74	0.574	
34	1.73	0.957	
43	1.73	0.957	
Std Dev	1.72	1.000	
32	1.72	1.085	
14	1.71	1.340	
14	1.70	1.595	

241.99		Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Other	
31	1.70	-0.820	
219	1.49	0.000	
Median	1.49	0.000	
Std Dev	1.24	1.000	
330	1.03	1.860	

241.XX		Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Total Method	
275	1.87	-2.781	
111	1.86	-2.478	
275	1.84	-2.174	
Std Dev	1.78	-1.000	
24	1.78	-0.961	
23	1.77	-0.758	
23	1.77	-0.657	
24	1.77	-0.657	
32	1.76	-0.556	
43	1.74	-0.152	
Median	1.73	0.000	
34	1.73	0.152	
43	1.73	0.152	
32	1.72	0.253	

14	1.71	0.455
14	1.70	0.657
31	1.70	0.758
Std Dev	1.68	1.000
219	1.67	1.214
219	1.49	4.875
330	1.03	14.209

251.30		Total Lead	
Lab	PPM	ICP	
275	9.00	-66.581	
18	1.20	-1.256	
Std Dev	1.17	-1.000	
43	1.05	0.000	
Median	1.05	0.000	
275	1.04	0.084	
43	1.00	0.419	

251.99		Total Lead	
Lab	PPM	Other	
24	0.48	0.000	
Median	0.48	0.000	

251.XX		Total Lead	
Lab	PPM	Total Method	
275	9.00	-69.900	
18	1.20	-1.362	
Std Dev	1.16	-1.000	
43	1.05	-0.044	
Median	1.05	0.000	
275	1.04	0.044	
43	1.00	0.395	
Std Dev	0.93	1.000	
24	0.48	4.960	

261.30		Acid Soluble Manganese	
Lab	PPM	ICP	
330	281.00	-1.340	
Std Dev	245.76	-1.000	
Median	142.11	0.000	
Std Dev	38.47	1.000	
111	3.23	1.340	

261.99		Acid Soluble Manganese	
Lab	PPM	Other	
24	355.00	-1.593	
Std Dev	345.80	-1.000	
43	339.00	-0.561	
43	338.50	-0.529	
31	330.30	0.000	
Median	330.30	0.000	
18	322.50	0.503	
Std Dev	314.80	1.000	
219	313.45	1.087	
219	313.35	1.093	

261.XX		Acid Soluble Manganese	
Lab	PPM	Total Method	
24	355.00	-1.732	
Std Dev	341.27	-1.000	
43	339.00	-0.879	
43	338.50	-0.852	
31	330.30	-0.416	
18	322.50	0.000	
Median	322.50	0.000	
219	313.45	0.482	
219	313.35	0.488	
Std Dev	303.73	1.000	
330	281.00	2.211	
111	3.23	17.011	

271.99		Water Soluble Manganese	
Lab	PPM	Other	
330	177.00	0.000	
Median	177.00	0.000	

271.XX		Water Soluble Manganese	
Lab	PPM	Total Method	
330	177.00	0.000	
Median	177.00	0.000	

281.30		Total Mercury	
Lab	PPM	ICP	
24	<0.0001	0.000	
Median	0.00	0.000	

281.XX		Total Mercury	
Lab	PPM	Total Method	
24	<0.0001	0.000	
Median	0.00	0.000	

289.30		Total Molybdenum	
Lab	PPM	ICP	
330			

289.99		Total Molybdenum	
Lab	PPM	Other	
24	21.45	-1.340	
Std Dev	20.04	-1.000	
Median	15.88	0.000	
Std Dev	11.71	1.000	
31	10.30	1.340	

289.XX		Total Molybdenum	
Lab	PPM	Total Method	
330	53.00	-16.865	
24	21.45	-3.004	
Std Dev	16.89	-1.000	
18	15.00	-0.170	
64	14.88	-0.115	
Median	14.61	0.000	
43	14.35	0.115	
43	14.25	0.159	
Std Dev	12.34	1.000	
111	11.50	1.367	
31	10.30	1.895	

291.30		Total Nickel	
Lab	PPM	ICP	
18			

291.99		Total Nickel	
Lab	PPM	Other	
24	29.50	-1.340	
Std Dev	28.42	-1.000	
Median	25.25	0.000	
Std Dev	22.08	1.000	
31	21.00	1.340	

291.XX		Total Nickel	
Lab	PPM	Total Method	
24	29.50	-10.086	

Std Dev	23.19	-1.000
18	22.55	-0.072
43	22.50	0.000
43	22.50	0.000
Median	22.50	0.000
64	22.19	0.447
Std Dev	21.81	1.000
31	21.00	2.161
330	15.00	10.806

301.30 Total Selenium		
Lab	PPM	ICP
24	<0.0001	0.000
18	0.75	-1.992
Std Dev	0.48	-1.000
330	0.20	0.000
Median	0.20	0.000
140	0.01	0.688

301.XX Total Selenium		
Lab	PPM	Total Mthod
24	<0.0001	0.000
18	0.75	-1.992
Std Dev	0.48	-1.000
330	0.20	0.000
Median	0.20	0.000
140	0.01	0.688

311.00 Sodium		
Lab	%Na <sub>2</sub> O	Atomic Absorbtion
330	0.48	0.000
Median	0.48	0.000

311.99 Sodium		
Lab	%Na <sub>2</sub> O	Other
111	0.22	-1.893
31	0.20	-1.020
Std Dev	0.20	-1.000
23	0.19	-0.437
24	0.19	-0.146
Median	0.18	0.000
23	0.18	0.146
24	0.18	0.437
Std Dev	0.17	1.000

43	0.15	1.719
43	0.15	1.793

311.XX Sodium		
Lab	%Na <sub>2</sub> O	Total Method
330	0.48	-15.812
111	0.22	-1.608
Std Dev	0.20	-1.000
31	0.20	-0.804
23	0.19	-0.268
24	0.19	0.000
Median	0.19	0.000
23	0.18	0.268
24	0.18	0.536
Std Dev	0.17	1.000
43	0.15	1.715
43	0.15	1.784

321.00 Acid Soluble Zinc		
Lab		Atomic Absorption
219	89.85	0.000
Median	89.85	0.000

321.30 Acid Soluble Zinc		
Lab	PPM	ICP
111	165.00	-2.449
Std Dev	119.34	-1.000
18	90.45	-0.083
Median	87.83	0.000
64	85.20	0.083
Std Dev	56.31	1.000
24	11.85	2.411

321.99 Acid Soluble Zinc		
Lab		Other
330	8205.00	-578.481
31	105.30	-1.162
Std Dev	103.03	-1.000
43	89.00	0.000
Median	89.00	0.000
43	86.50	0.178
219	83.90	0.364

321.XX Acid Soluble Zinc		
Lab	PPM	Total Method
330	8205.00	-677.035
111	165.00	-6.305
31	105.30	-1.324
Std Dev	101.41	-1.000
18	90.45	-0.086
219	89.85	-0.035
Median	89.43	0.000
43	89.00	0.035
43	86.50	0.244
64	85.20	0.352
219	83.90	0.461
Std Dev	77.44	1.000
24	11.85	6.472

325.10 Fluoride		
Lab	%	Electrode
32	2.04	-1.931
32	2.02	-1.813
23	1.89	-0.788
24	1.84	-0.355
24	1.83	-0.276
79	1.79	0.000
Median	1.79	0.000
34	1.78	0.079
23	1.76	0.276
14	1.63	1.261
14	1.62	1.340
111	0.25	12.139

325.99 Fluoride		
Lab	%	Other
330	1.85	-1.340
Median	1.79	0.000
31	1.72	1.340

325.XX Fluoride		
Lab	%	Total Method
32	2.04	-2.525
32	2.02	-2.371
23	1.89	-1.031
330	1.85	-0.618
24	1.84	-0.464

24	1.83	-0.361
79	1.79	0.000
Median	1.79	0.000
34	1.78	0.103
23	1.76	0.361
31	1.72	0.722
14	1.63	1.649
14	1.62	1.752
111	0.25	15.874