

## AFPC

2022-04

Grade

MAP +S, Zn

## Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
<b>AMMONIACAL NITROGEN</b>					
Ammoniacal Nitrogen, MgO distillation	920.03	001.10	1	11.69	0.00
Ammoniacal Nitrogen, Other		001.99	15	11.74	0.07
Method Group 001.XX PCT			16	11.74	0.08
<b>TOTAL NITROGEN</b>					
Total Nitrogen, Modified Comprehensive	978.02	010.11	1	11.74	0.00
Total Nitrogen, Combustion	993.13	010.60	13	11.66	0.31
Total Nitrogen, Other		010.99	1	11.66	0.00
Method Group 010.XX PCT			15	11.66	0.28
<b>TOTAL PHOSPHATE</b>					
Total Phosphate, Gravimetric Quimociac		020.10	3	40.10	0.13
Total Phosphate, Spectrometric	978.02	020.20	18	40.14	0.15
Total Phosphate, ICP	970.03	020.40	1	40.26	0.00
Method Group 020.XX PCT			22	40.14	0.18
<b>INSOLUBLE PHOSPHATE</b>					
Insoluble Phosphate, Gravimetric Quimociac	963.03C(a)	030.10	1	0.41	0.00
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	12	0.29	0.11
Method Group 030.XX PCT			13	0.30	0.12
<b>INDIRECT AVAILABLE PHOSPHATE</b>					
Indirect Available Phosphate, Gravimetric Quimociac	960.02	040.10	1	39.69	0.00
Indirect Available Phosphate, Spectrometric	960.02	040.20	11	39.87	0.14
Method Group 040.XX PCT			12	39.86	0.19
<b>DIRECT AVAILABLE PHOSPHATE</b>					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	2	38.80	0.04
Direct Available Phosphate, Spectrometric	960.03D	041.20	2	39.66	0.01
Direct Available Phosphate, ICP		041.50	3	39.61	0.41
Direct Available Phosphate, EDTA Extract	993.01	041.60	1	38.65	0.00
Method Group 041.XX PCT			8	39.43	0.75
<b>WATER SOLUBLE PHOSPHATE</b>					
Water Soluble Phosphate, Gravimetric Quimociac	962.03	048.10	2	35.50	0.05
Water Soluble Phosphate, Spectrometric	970.01	048.20	15	35.42	0.06
Method Group 048.XX PCT			17	35.43	0.08
<b>SOLUBLE POTASH AS K<sub>2</sub>O</b>					
Soluble Potash, ICP(Oxalate)		050.50	3	0.15	0.00
Soluble Potash, Other		050.99	5	0.15	0.00
Method Group 050.XX PCT			8	0.15	0.00
<b>FREE WATER</b>					
Free Water, Vacuum Oven	965.08B	060.00	14	0.83	0.28
Free Water, Vacuum Desiccate	965.08A	060.10	1	0.46	0.00
Free Water, Karl Fisher	972.01	060.20	2	1.28	0.09
Free Water, Other		060.99	2	0.78	0.00
Method Group 060.XX PCT			19	0.78	0.35
<b>ACID SOLUBLE CALCIUM AS CaO</b>					
Acid Soluble Calcium, ICP		101.30	14	0.54	0.03
Method Group 101.XX PCT			14	0.54	0.03
<b>ACID SOLUBLE MAGNESIUM AS MgO</b>					
Acid Soluble Magnesium, ICP		121.30	14	1.00	0.03
Method Group 121.XX PCT			14	1.00	0.03
<b>SULFATE SULFUR (S)</b>					
Sulfur, Gravimetric	980.02(a)	144.01	6	5.51	0.05
Sulfur, Other		144.99	10	5.52	0.09
Method Group 144.XX PCT			16	5.52	0.09
<b>TOTAL SULFUR (S)</b>					
Sulfur, Other		145.99	16	10.25	0.3

Method Group 145.XX PCT			16	10.25	0.4
<b>TOTAL ARSENIC</b>					
Total Arsenic, ICP	980.02(b)	151.02	5	10.0	0.8
Method Group 151.XX PPM			5	10.0	1.0
<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	6	2.5	0.4
Method Group 181.XX PPM			6	2.5	0.5
<b>ALUMINUM AS Al<sub>2</sub>O<sub>3</sub></b>					
ICP, %			14	1.51	0.04
Method Group 190.XX PCT			14	1.51	0.04
<b>TOTAL CHROMIUM</b>					
Total Chromium, ICP		191.30	7	98	8.4
Method Group 191.XX PPM			7	98	10.3
<b>ACID SOLUBLE COBALT</b>					
Acid Soluble Cobalt, ICP		202.30	6	3	0.4
Method Group 202.XX PPM			6	3	0.4
<b>ACID SOLUBLE COPPER</b>					
Method Group 221.XX PPM			7	3.0	2.4
<b>ACID SOLUBLE IRON AS Fe<sub>2</sub>O<sub>3</sub></b>					
Acid Soluble Iron, ICP		241.30	14	1.27	0.02
Method Group 241.XX PCT			14	1.27	0.02
<b>TOTAL LEAD</b>					
Total Lead, ICP		251.30	6	2.0	0.4
Method Group 251.XX PPM			6	2.0	0.5
<b>ACID SOLUBLE MANGANESE</b>					
Acid Soluble Manganese, ICP	972.02a	261.30	6	266	2.9
Acid Soluble Manganese, Other		261.99	2	1	0.0
Method Group 261.XX PPM			8	264	68.6
<b>TOTAL MERCURY</b>					
Total Mercury, Atomic Absorbtion		281.00	1	8	0.00
Total Mercury, Other		281.99	1	0	0.00
Method Group 281.XX PPM			2	3.91	3.55
<b>TOTAL MOLYBDENUM</b>					
Total Molybdenum, ICP		289.30	6	12	2.5
Method Group 289.XX PPM			6	12	3.1
<b>TOTAL NICKEL</b>					
Total Nickel, ICP		291.30	7	15.5	1.1
Method Group 291.XX PPM			7	15.5	1.3
<b>TOTAL SELENIUM</b>					
Total Selenium, ICP		301.30	1	1.7	0.0
Method Group 301.XX PPM			1	1.7	0.0
<b>SODIUM AS Na<sub>2</sub>O</b>					
Sodium, Flame Photometric	974.01	311.30	1	2.75	0.00
Sodium, Other		311.99	7	0.25	0.02
Method Group 311.XX PCT			8	0.26	0.03
<b>ACID SOLUBLE ZINC</b>					
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	2	0.8	0.2
Acid Soluble Zinc, ICP		321.30	14	1.0	0.0
Acid Soluble Zinc, Other		321.99	1	1.1	0.0
Method Group 321.XX %			17	1.0	0.1
<b>FLUORIDE</b>					
Volumetric		325.10	14	1.81	0.10
Distilled/Electrode		325.99	2	1.89	0.01
Method Group 325.XX PCT			16	1.84	0.14

001.10 Ammoniacal Nitrogen		
Lab	MgO distillation	
113	11.69	0.000
<b>Median</b>	<b>11.69</b>	<b>0.000</b>

001.99 Ammoniacal Nitrogen		
Lab	Other	
55	11.90	-2.382
237	11.84	-1.414
<b>Std Dev</b>	<b>11.81</b>	<b>-1.000</b>
24	11.80	-0.819
79	11.79	-0.744
79	11.78	-0.596
24	11.77	-0.372
38	11.75	-0.074
32	11.74	0.000
<b>Median</b>	<b>11.74</b>	<b>0.000</b>
61	11.74	0.074
23	11.73	0.223
25	11.70	0.670
34	11.70	0.670
61	11.70	0.670
23	11.68	0.893
<b>Std Dev</b>	<b>11.67</b>	<b>1.000</b>
32	11.67	1.042

001.XX Ammoniacal Nitrogen		
Lab	Total Method	
55	11.90	-2.489
237	11.84	-1.493
<b>Std Dev</b>	<b>11.80</b>	<b>-1.000</b>
24	11.80	-0.881
79	11.79	-0.804
79	11.78	-0.651
24	11.77	-0.421
38	11.75	-0.115
32	11.74	-0.038
<b>Median</b>	<b>11.74</b>	<b>0.000</b>
61	11.74	0.038
23	11.73	0.191
25	11.70	0.651
34	11.70	0.651
61	11.70	0.651
113	11.69	0.804

23	11.68	0.881
<b>Std Dev</b>	<b>11.67</b>	<b>1.000</b>
32	11.67	1.034

010.11 Total Nitrogen		
Lab	Modified Comprehensive	
25	11.74	0.000
<b>Median</b>	<b>11.74</b>	<b>0.000</b>

010.60 Total Nitrogen		
Lab	Combustion	
39	11.94	-0.897
79	11.82	-0.510
79	11.80	-0.447
103	11.77	-0.351
66	11.75	-0.271
140	11.73	-0.207
80	11.66	0.000
<b>Median</b>	<b>11.66</b>	<b>0.000</b>
63	11.60	0.207
38	11.55	0.351
110	11.35	0.989
<b>Std Dev</b>	<b>11.35</b>	<b>1.000</b>
29	11.24	1.340
14	11.17	1.579
14	11.17	1.579

010.99 Total Nitrogen		
Lab	Other	
113	11.66	0.000
<b>Median</b>	<b>11.66</b>	<b>0.000</b>

010.XX Total Nitrogen		
Lab	Total Method	
39	11.94	-1.225
<b>Std Dev</b>	<b>11.89</b>	<b>-1.000</b>
79	11.82	-0.697
79	11.80	-0.610
103	11.77	-0.479
66	11.75	-0.370
25	11.74	-0.327
140	11.73	-0.283
80	11.66	0.000
113	11.66	0.000

<b>Median</b>	<b>11.66</b>	<b>0.000</b>
63	11.60	0.283
38	11.55	0.479
<b>Std Dev</b>	<b>11.43</b>	<b>1.000</b>
110	11.35	1.351
29	11.24	1.830
14	11.17	2.157
14	11.17	2.157

020.10 Total Phosphate		
Lab	Gravimetric Quimociac	
82	40.20	-0.744
113	40.10	0.000
<b>Median</b>	<b>40.10</b>	<b>0.000</b>
<b>Std Dev</b>	<b>39.97</b>	<b>1.000</b>
241	39.84	1.936

020.20 Total Phosphate		
Lab	Spectrometric	
23	40.31	-1.203
16	40.29	-1.065
<b>Std Dev</b>	<b>40.28</b>	<b>-1.000</b>
32	40.28	-0.962
23	40.26	-0.825
34	40.21	-0.515
24	40.20	-0.447
32	40.18	-0.309
61	40.16	-0.172
79	40.15	-0.103
<b>Median</b>	<b>40.14</b>	<b>0.000</b>

61	40.12	0.103
79	40.12	0.103
55	40.10	0.241
25	40.02	0.790
24	40.01	0.859
<b>Std Dev</b>	<b>39.99</b>	<b>1.000</b>
140	39.96	1.237
237	39.91	1.581
14	39.77	2.543
14	39.77	2.543

020.40 Total Phosphate		
Lab	Automated	
82	40.26	0.000

<b>Median</b>	<b>40.26</b>	<b>0.000</b>
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020.XX Total Phosphate		
Lab	Total Method	
23	40.31	-1.203
16	40.29	-1.065
<b>Std Dev</b>	<b>40.28</b>	<b>-1.000</b>
32	40.28	-0.962
82	40.26	-0.859
23	40.26	-0.825
34	40.21	-0.515
24	40.20	-0.447
82	40.20	-0.447
32	40.18	-0.309
61	40.16	-0.172
79	40.15	-0.103
<b>Median</b>	<b>40.14</b>	<b>0.000</b>

61	40.12	0.103
79	40.12	0.103
55	40.10	0.241
113	40.10	0.241
25	40.02	0.790
24	40.01	0.859
<b>Std Dev</b>	<b>39.99</b>	<b>1.000</b>
140	39.96	1.237
237	39.91	1.581
241	39.84	2.027
14	39.77	2.543
14	39.77	2.543

030.10 Insoluble Phosphate		
Lab	Gravimetric Quimociac	
113	0.41	0.000
<b>Median</b>	<b>0.41</b>	<b>0.000</b>

030.20 Insoluble Phosphate		
Lab	Spectrometric	
61	0.51	-2.033
32	0.40	-1.017
<b>Std Dev</b>	<b>0.40</b>	<b>-1.000</b>
34	0.39	-0.878
32	0.38	-0.832
25	0.38	-0.786
140	0.30	-0.046

Median	0.29	0.000
23	0.29	0.046
23	0.27	0.185
61	0.26	0.323
Std Dev	0.18	1.000
24	0.18	1.017
24	0.16	1.201
16	0.15	1.312

030.XX Insoluble Phosphate		
Lab	Total Method	
61	0.51	-2.216
113	0.41	-1.185
32	0.40	-1.082
Std Dev	0.39	-1.000
34	0.39	-0.928
32	0.38	-0.876
25	0.38	-0.825
140	0.30	0.000
Median	0.30	0.000
23	0.29	0.103
23	0.27	0.258
61	0.26	0.412
Std Dev	0.20	1.000
24	0.18	1.185
24	0.16	1.392
16	0.15	1.515

040.10 Indirect Available Phosphate		
Lab	Gravimetric Quimociac	
113	39.69	0.000
Median	39.69	0.000

040.20 Indirect Available Phosphate		
Lab	Spectrometric	
16	40.14	-2.019
23	40.04	-1.285
24	40.02	-1.138
Std Dev	40.00	-1.000
23	39.97	-0.771
32	39.88	-0.073
61	39.87	0.000
Median	39.87	0.000
24	39.85	0.110

34	39.83	0.294
32	39.80	0.477
Std Dev	39.73	1.000
140	39.66	1.505
61	39.65	1.579

040.XX Indirect Available Phosphate		
Lab	Total Method	
16	40.14	-1.803
23	40.04	-1.165
24	40.02	-1.037
Std Dev	40.01	-1.000
23	39.97	-0.718
32	39.88	-0.112
61	39.87	-0.048
Median	39.86	0.000
24	39.85	0.048
34	39.83	0.207
32	39.80	0.367
Std Dev	39.70	1.000
113	39.69	1.069
140	39.66	1.260
61	39.65	1.324

041.10 Direct Available Phosphate		
Lab	Gravimetric Quimociac	
79	38.85	-1.340
Std Dev	38.84	-1.000
Median	38.80	0.000
Std Dev	38.76	1.000
79	38.75	1.340

041.20 Direct Available Phosphate		
Lab	Spectrometric	
38	39.67	-1.340
Std Dev	39.66	-1.000
Median	39.66	0.000
Std Dev	39.65	1.000
25	39.65	1.340

041.50 Direct Available Phosphate		
Lab	ICP	
63	40.35	-1.815
Std Dev	40.02	-1.000

66	39.61	0.000
Median	39.61	0.000
80	39.25	0.865

041.60 Direct Available Phosphate		
Lab	EDTA Extract	
103	38.65	0.000
Median	38.65	0.000

041.XX Direct Available Phosphate		
Lab	Total Method	
63	40.35	-1.498
Std Dev	40.04	-1.000
38	39.67	-0.386
25	39.65	-0.353
66	39.61	-0.288
Median	39.43	0.000
80	39.25	0.288
79	38.85	0.938
Std Dev	38.81	1.000
79	38.75	1.100
103	38.65	1.263

048.10 Water Soluble Phosphate		
Lab	Gravimetric Quimociac	
82	35.58	-1.340
Std Dev	35.56	-1.000
Median	35.50	0.000
Std Dev	35.45	1.000
113	35.43	1.340

048.20 Water Soluble Phosphate		
Lab	Spectrometric	
16	35.65	-3.626
24	35.56	-2.128
82	35.51	-1.419
Std Dev	35.48	-1.000
32	35.46	-0.552
32	35.46	-0.552
61	35.46	-0.552
25	35.44	-0.315
24	35.42	0.000
Median	35.42	0.000
140	35.41	0.236

23	35.38	0.631
79	35.37	0.788
79	35.37	0.788
Std Dev	35.36	1.000
34	35.31	1.813
23	35.26	2.601
61	35.18	3.862

048.XX Water Soluble Phosphate		
Lab	Total Method	
16	35.65	-3.468
82	35.58	-2.286
24	35.56	-1.971
82	35.51	-1.261
Std Dev	35.49	-1.000
32	35.46	-0.394
32	35.46	-0.394
61	35.46	-0.394
25	35.44	-0.158
113	35.43	0.000
Median	35.43	0.000
24	35.42	0.158
140	35.41	0.394
23	35.38	0.788
79	35.37	0.946
79	35.37	0.946
Std Dev	35.37	1.000
34	35.31	1.971
23	35.26	2.759
61	35.18	4.020

050.50 %K <sub>2</sub> O Soluble Potash		
Lab	ICP(Oxalate)	
237	0.16	-2.680
Std Dev	0.15	-1.000
23	0.15	0.000
23	0.15	0.000
Median	0.15	0.000

050.99 Soluble Potash		
Lab	%K <sub>2</sub> O	Other
80	0.45	0.134
24	0.15	0.000
24	0.15	0.000

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61	0.15	0.000
61	0.15	0.000
Median	0.15	0.000

050.XX Soluble Potash		
Lab	%K <sub>2</sub> O	Total Method
80	0.45	-120.449
237	0.16	-5.360
Std Dev	0.15	-1.000
23	0.15	0.000
23	0.15	0.000
24	0.15	0.000
24	0.15	0.000
61	0.15	0.000
61	0.15	0.000
Median	0.15	0.000

060.00 Free Water		
Lab		Vacuum Oven
16	1.24	-1.476
140	1.16	-1.193
Std Dev	1.11	-1.000
24	1.06	-0.837
23	1.05	-0.784
23	1.02	-0.677
24	0.99	-0.588
113	0.94	-0.410
Median	0.83	0.000
79	0.71	0.410
79	0.71	0.410
34	0.67	0.570
61	0.66	0.588
Std Dev	0.54	1.000
32	0.53	1.051
32	0.51	1.122
61	0.50	1.175

060.10 Free Water		
Lab		Vacuum Desiccate
237	0.46	0.000
Median	0.46	0.000

060.20 Free Water		
Lab		Karl Fisher
237	0.46	0.000
Median	0.46	0.000

25	1.40	-1.340
Std Dev	1.37	-1.000
Median	1.28	0.000
Std Dev	1.18	1.000
55	1.15	1.340

060.99 Free Water		
Lab		Other
14	0.78	0.000
14	0.78	0.000
Median	0.78	0.000

060.XX Free Water		
Lab		Total Method
25	1.40	-2.160
16	1.24	-1.596
140	1.16	-1.323
55	1.15	-1.288
Std Dev	1.07	-1.000
24	1.06	-0.979
23	1.05	-0.928
23	1.02	-0.825
24	0.99	-0.739
113	0.94	-0.567
14	0.78	0.000
14	0.78	0.000
Median	0.78	0.000
79	0.71	0.223
79	0.71	0.223
34	0.67	0.378
61	0.66	0.395
32	0.53	0.842
32	0.51	0.911
61	0.50	0.962
Std Dev	0.48	1.000
237	0.46	1.099

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
14	2.96	-89.333
14	2.96	-89.333
61	0.66	-4.430
Std Dev	0.57	-1.000
237	0.55	-0.495

32	0.55	-0.369
61	0.55	-0.369
34	0.55	-0.185
Median	0.54	0.000
82	0.54	0.185
32	0.53	0.369
24	0.52	0.738
16	0.52	0.923
Std Dev	0.51	1.000
23	0.51	1.292
23	0.50	1.477
24	0.46	2.953

101.XX Acid Soluble Calcium		
Lab	%CaO	Total Method
14	2.96	-89.333
14	2.96	-89.333
61	0.66	-4.430
Std Dev	0.57	-1.000
237	0.55	-0.495
32	0.55	-0.369
61	0.55	-0.369
34	0.55	-0.185
Median	0.54	0.000
82	0.54	0.185
32	0.53	0.369
24	0.52	0.738
16	0.52	0.923
Std Dev	0.51	1.000
23	0.51	1.292
23	0.50	1.477
24	0.46	2.953

121.30 Acid Soluble Magnesium		
Lab	%MgO	ICP
237	1.07	-2.283
61	1.06	-2.055
Std Dev	1.03	-1.000
24	1.03	-0.983
32	1.02	-0.625
32	1.02	-0.447
34	1.01	-0.268
82	1.01	-0.268
Median	1.00	0.000

24	1.00	0.268
16	0.99	0.304
23	0.99	0.625
61	0.98	0.804
Std Dev	0.97	1.000
23	0.97	1.161
14	0.72	10.095
14	0.72	10.095

121.XX Acid Soluble Magnesium		
Lab	%MgO	Total Method
237	1.07	-2.283
61	1.06	-2.055
Std Dev	1.03	-1.000
24	1.03	-0.983
32	1.02	-0.625
32	1.02	-0.447
34	1.01	-0.268
82	1.01	-0.268
Median	1.00	0.000
24	1.00	0.268
16	0.99	0.304
23	0.99	0.625
61	0.98	0.804
Std Dev	0.97	1.000
23	0.97	1.161
14	0.72	10.095
14	0.72	10.095

144..01 Sulfate Sulfur (S)		
Lab		Gravimetric
25	5.67	-3.050
16	5.56	-1.017
Std Dev	5.56	-1.000
79	5.53	-0.462
Median	5.51	0.000
79	5.48	0.462
140	5.48	0.462
Std Dev	5.45	1.000
241	5.41	1.756

144.99 Sulfate Sulfur (S)		
Lab		Other
24	5.73	-2.255

23	5.69	-1.831
Std Dev	5.61	-1.000
38	5.61	-0.982
32	5.54	-0.186
32	5.53	-0.080
Median	5.52	0.000
23	5.51	0.080
34	5.51	0.080
24	5.45	0.716
Std Dev	5.42	1.000
275	5.35	1.778
237	5.09	4.539

34	10.27	-0.057
23	10.26	-0.008
Median	10.25	0.000
23	10.25	0.008
24	10.24	0.057
24	10.23	0.073
275	9.96	0.939
Std Dev	9.94	1.000
63	9.88	1.220
14	9.71	1.753
14	9.71	1.753
55	4.90	17.293

140	6.11	4.964
151.XX	Total Arsenic	
Lab	Total Method	
25	<1	0.000
24	10.22	-0.281
82	10.05	-0.064
61	10.00	0.000
Median	10.00	0.000
Std Dev	9.22	1.000
61	9.00	1.276
140	6.11	4.964

61	2.00	1.043
61	1.00	3.338

190.00	Aluminum	
Lab	%Al <sub>2</sub> O <sub>3</sub>	ICP
237	1.57	-1.646
14	1.56	-1.496
14	1.56	-1.496
Std Dev	1.54	-1.000
16	1.54	-0.925
23	1.53	-0.544
23	1.51	0.000
24	1.51	0.000
24	1.51	0.000
Median	1.51	0.000
61	1.50	0.136
82	1.49	0.408
34	1.49	0.544
Std Dev	1.47	1.000
32	1.46	1.224
32	1.45	1.496
61	1.44	1.769

144.XX	Sulfate Sulfur (S)	
Lab	Total Method	
24	5.73	-2.848
23	5.69	-2.312
25	5.67	-2.044
38	5.61	-1.240
Std Dev	5.59	-1.000
16	5.56	-0.569
32	5.54	-0.235
79	5.53	-0.168
32	5.53	-0.101
Median	5.52	0.000
23	5.51	0.101
34	5.51	0.101
79	5.48	0.502
140	5.48	0.502
24	5.45	0.905
Std Dev	5.44	1.000
241	5.41	1.441
275	5.35	2.245
237	5.09	5.731

145.XX	Total Sulfur (S)	
Lab	Total Method	
113	11.41	-3.740
80	11.13	-2.819
Std Dev	10.56	-1.000
39	10.49	-0.759
25	10.37	-0.380
32	10.35	-0.315
32	10.33	-0.250
34	10.27	-0.057
23	10.26	-0.008
Median	10.25	0.000
23	10.25	0.008
24	10.24	0.057
24	10.23	0.073
275	9.96	0.939
Std Dev	9.94	1.000
63	9.88	1.220
14	9.71	1.753
14	9.71	1.753
55	4.90	17.293

165.99	Acid Soluble Boron	
Lab	PPM	Other
24	35.20	0.000
Median	35.20	0.000

165.XX, ppm	Acid Soluble Boron	
Lab	PPM	Total Method
24	35.20	0.000
Median	35.20	0.000

181.30	Total Cadmium	
Lab	PPM	ICP
25	<1	0.000
275	2.71	-0.588
237	2.70	-0.552
16	2.58	-0.286
Median	2.45	0.000
24	2.33	0.286
Std Dev	2.02	1.000
61	2.00	1.043
61	1.00	3.338

190.XX	Aluminum	
Lab	%Al <sub>2</sub> O <sub>3</sub>	Total Method
237	1.57	-1.646
14	1.56	-1.496
14	1.56	-1.496
Std Dev	1.54	-1.000
16	1.54	-0.925
23	1.53	-0.544
23	1.51	0.000
24	1.51	0.000
24	1.51	0.000
Median	1.51	0.000
61	1.50	0.136
82	1.49	0.408
34	1.49	0.544
Std Dev	1.47	1.000
32	1.46	1.224
32	1.45	1.496
61	1.44	1.769

145.99	Total Sulfur (S)	
Lab	Other	
113	11.41	-3.740
80	11.13	-2.819
Std Dev	10.56	-1.000
39	10.49	-0.759
25	10.37	-0.380
32	10.35	-0.315
32	10.33	-0.250

151.30	Total Arsenic	
Lab	ICP	
25	<1	0.000
24	10.22	-0.281
82	10.05	-0.064
61	10.00	0.000
Median	10.00	0.000
Std Dev	9.22	1.000
61	9.00	1.276

181.XX	Total Cadmium	
Lab	PPM	Total Method
25	<1	0.000
275	2.71	-0.588
237	2.70	-0.552
16	2.58	-0.286
Median	2.45	0.000
24	2.33	0.286
Std Dev	2.02	1.000

191.30 Total Chromium		
Lab	ICP	
61	103.50	-0.696
61	103.50	-0.696
82	102.00	-0.518
16	97.64	0.000
<b>Median</b>	<b>97.64</b>	<b>0.000</b>
24	91.80	0.693
25	91.14	0.772
237	90.25	0.877

191.XX Total Chromium		
Lab	PPM	Total Method
61	103.50	-0.696
61	103.50	-0.696
82	102.00	-0.518
16	97.64	0.000
<b>Median</b>	<b>97.64</b>	<b>0.000</b>
24	91.80	0.693
25	91.14	0.772
237	90.25	0.877

202.30 Acid Soluble Cobalt		
Lab	PPM	ICP
25	<1	0.000
82	3.60	-2.081
<b>Std Dev</b>	<b>3.21</b>	<b>-1.000</b>
61	3.00	-0.409
16	2.92	-0.172
<b>Median</b>	<b>2.85</b>	<b>0.000</b>
237	2.79	0.172
<b>Std Dev</b>	<b>2.49</b>	<b>1.000</b>
24	2.40	1.263
61	1.00	5.164

202.XX Acid Soluble Cobalt		
Lab	PPM	Total Method
25	<1	0.000
82	3.60	-2.081
<b>Std Dev</b>	<b>3.21</b>	<b>-1.000</b>
61	3.00	-0.409
16	2.92	-0.172
<b>Median</b>	<b>2.85</b>	<b>0.000</b>
237	2.79	0.172
<b>Std Dev</b>	<b>2.49</b>	<b>1.000</b>
24	2.40	1.263
61	1.00	5.164

221.30 Acid Soluble Copper		
Lab	PPM	ICP
16	6.12	-1.588
24	5.56	-1.306
<b>Std Dev</b>	<b>4.95</b>	<b>-1.000</b>
275	4.60	-0.826

82	2.95	0.000
<b>Median</b>	<b>2.95</b>	<b>0.000</b>
61	2.50	0.225
237	2.31	0.323
61	1.50	0.726

221.XX Acid Soluble Copper		
Lab	PPM	Total Method
16	6.12	-1.588
24	5.56	-1.306
<b>Std Dev</b>	<b>4.95</b>	<b>-1.000</b>
275	4.60	-0.826
82	2.95	0.000
<b>Median</b>	<b>2.95</b>	<b>0.000</b>
61	2.50	0.225
237	2.31	0.323
61	1.50	0.726

241.30 Acid Soluble Iron		
Lab	%Fe <sub>2</sub> O <sub>3</sub>	ICP
24	1.29	-0.987
61	1.29	-0.987
237	1.28	-0.677
14	1.28	-0.423
14	1.28	-0.423
24	1.28	-0.141
82	1.28	-0.141
<b>Median</b>	<b>1.27</b>	<b>0.000</b>
23	1.27	0.141
16	1.26	0.451
23	1.26	0.705
34	1.26	0.987
<b>Std Dev</b>	<b>1.25</b>	<b>1.000</b>
32	1.25	1.269
32	1.25	1.552
61	1.22	2.962

241.XX Acid Soluble Iron		
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Total Method
24	1.29	-0.987
61	1.29	-0.987
237	1.28	-0.677
14	1.28	-0.423
14	1.28	-0.423

24	1.28	-0.141
82	1.28	-0.141
<b>Median</b>	<b>1.27</b>	<b>0.000</b>
23	1.27	0.141
16	1.26	0.451
23	1.26	0.705
34	1.26	0.987
<b>Std Dev</b>	<b>1.25</b>	<b>1.000</b>
32	1.25	1.269
32	1.25	1.552
61	1.22	2.962

251.30 Total Lead		
Lab	PPM	ICP
25	<1	0.000
61	3.50	-3.911
<b>Std Dev</b>	<b>2.39</b>	<b>-1.000</b>
24	2.28	-0.725
275	2.01	-0.007
<b>Median</b>	<b>2.00</b>	<b>0.000</b>
61	2.00	0.007
<b>Std Dev</b>	<b>1.62</b>	<b>1.000</b>
16	1.60	1.058
237	0.00	5.229

251.XX Total Lead		
Lab	PPM	Total Method
25	<1	0.000
61	3.50	-3.911
<b>Std Dev</b>	<b>2.39</b>	<b>-1.000</b>
24	2.28	-0.725
275	2.01	-0.007
<b>Median</b>	<b>2.00</b>	<b>0.000</b>
61	2.00	0.007
<b>Std Dev</b>	<b>1.62</b>	<b>1.000</b>
16	1.60	1.058
237	0.00	5.229

261.30 Acid Soluble Manganese		
Lab	ICP	
237	286.03	-7.036
61	268.50	-1.028
<b>Std Dev</b>	<b>268.42</b>	<b>-1.000</b>
61	265.50	0.000

82	265.50	0.000
<b>Median</b>	<b>265.50</b>	<b>0.000</b>
16	263.29	0.759
<b>Std Dev</b>	<b>262.58</b>	<b>1.000</b>
24	254.00	3.941

261.99 Acid Soluble Manganese		
Lab	PPM	Other
14	0.98	0.000
14	0.98	0.000
<b>Median</b>	<b>0.98</b>	<b>0.000</b>

261.XX Acid Soluble Manganese		
Lab	PPM	Total Method
237	286.03	-0.384
61	268.50	-0.073
61	265.50	-0.020
82	265.50	-0.020
<b>Median</b>	<b>264.39</b>	<b>0.000</b>
16	263.29	0.020
24	254.00	0.184
<b>Std Dev</b>	<b>208.05</b>	<b>1.000</b>
14	0.98	4.675
14	0.98	4.675

281.00 Total Mercury		
Lab	PPM	Atomic Absorbtion
82	7.82	0.000
<b>Median</b>	<b>7.82</b>	<b>0.000</b>

281.30 Total Mercury		
Lab	PPM	ICP
25	<1	0.000
24	<0.01	0.000
<b>Median</b>	<b>0.00</b>	<b>0.000</b>

281.99 Total Mercury		
Lab	PPM	Other
275	0.00	0.000
<b>Median</b>	<b>0.00</b>	<b>0.000</b>

281.XX Total Mercury		
Lab	PPM	Total Method
25	<1	0.000

24	<0.01	0.000
82	7.82	-1.340
Std Dev	6.83	-1.000
Median	3.91	0.000
275	0.00	1.340

289.30	Total Molybdenum	
Lab	PPM	ICP

289.XX	Total Molybdenum	
Lab	PPM	Total Method
25	<1	0.000
61	15.00	-1.064
Std Dev	14.84	-1.000
61	13.00	-0.269
24	12.70	-0.149
Median	12.33	0.000
82	11.95	0.149
Std Dev	9.81	1.000
16	8.76	1.419
237	0.00	4.904

291.30	Total Nickel	
Lab		ICP

291.XX	Total Nickel	
Lab	PPM	Total Method
24	24.40	-8.407
Std Dev	16.56	-1.000
82	16.35	-0.803
16	15.55	-0.047
61	15.50	0.000
Median	15.50	0.000
237	14.56	0.885
61	14.50	0.945
Std Dev	14.44	1.000
25	11.45	3.831

301.30	Total Selenium	
Lab	PPM	ICP
25	<1	0.000
24	1.73	0.000
Median	1.73	0.000

301.XX	Total Selenium	
Lab	PPM	Total Method
25	<1	0.000
24	1.73	0.000
Median	1.73	0.000

311.30	Sodium	
Lab	%Na <sub>2</sub> O	Flame Photometric
237	2.75	0.000
Median	2.75	0.000

311.99	Sodium	
Lab	%Na <sub>2</sub> O	Other
23	0.27	-0.975
23	0.27	-0.731
61	0.26	-0.487
82	0.25	0.000
Median	0.25	0.000
24	0.24	0.731
24	0.24	0.731
61	0.23	0.975

311.XX	Sodium	
Lab	%Na <sub>2</sub> O	Total Method
237	2.75	-106.990
Std Dev	0.28	-1.000
23	0.27	-0.643
23	0.27	-0.429
61	0.26	-0.214
Median	0.26	0.000
82	0.25	0.214
24	0.24	0.858
24	0.24	0.858
Std Dev	0.23	1.000
61	0.23	1.072

321.00	Acid Soluble Zinc	
Lab		Atomic Absorption
275	0.99	-1.340
Std Dev	0.94	-1.000
Median	0.78	0.000
Std Dev	0.62	1.000
55	0.57	1.340

321.30	Acid Soluble Zinc	
Lab	PPM	ICP
237	3.67	-67.249
66	1.15	-4.300
Std Dev	1.01	-1.000
61	1.01	-0.935
140	1.01	-0.810
23	0.98	-0.187
34	0.98	-0.187
23	0.98	-0.062
Median	0.97	0.000
32	0.97	0.062
32	0.96	0.312
24	0.95	0.686
25	0.95	0.686
Std Dev	0.93	1.000
24	0.93	1.060
61	0.93	1.134
16	0.89	2.128

321.99	Acid Soluble Zinc	
Lab		Other
63	1.09	0.000
Median	1.09	0.000

321.XX	Acid Soluble Zinc	
Lab	PPM	Total Method
237	3.67	-60.188
66	1.15	-3.797
63	1.09	-2.457
Std Dev	1.02	-1.000
61	1.01	-0.782
140	1.01	-0.670
275	0.99	-0.369
23	0.98	-0.112
34	0.98	-0.112
23	0.98	0.000
Median	0.98	0.000
32	0.97	0.112
32	0.96	0.335
24	0.95	0.670
25	0.95	0.670
Std Dev	0.93	1.000
24	0.93	1.005

61	0.93	1.072
16	0.89	1.962
55	0.57	9.045

325.10	Fluoride	
Lab	%	Electrode
32	1.91	-0.933
16	1.90	-0.838
24	1.89	-0.694
32	1.87	-0.550
24	1.86	-0.407
82	1.85	-0.359
34	1.82	-0.072
Median	1.81	0.000
275	1.81	0.072
79	1.74	0.694
79	1.73	0.790
23	1.73	0.838
23	1.64	1.651
14	1.45	3.518
14	1.45	3.518

325.99	Fluoride	
Lab	%	Other
61	1.90	-1.340
Median	1.89	0.000
61	1.89	1.340

325.XX	Fluoride	
Lab	%	Total Method
32	1.91	-0.643
16	1.90	-0.557
61	1.90	-0.557
61	1.89	-0.429
24	1.89	-0.429
32	1.87	-0.300
24	1.86	-0.172
82	1.85	-0.129
Median	1.84	0.000
34	1.82	0.129
275	1.81	0.257
79	1.74	0.815
79	1.73	0.900
23	1.73	0.943



23	1.64	1.672
14	1.45	3.345
14	1.45	3.345