

AFPC

2016-02

Grade

11-52-0

Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
AMMONIACAL NITROGEN					
Ammoniacal Nitrogen, MgO distillation	920.03	001.10	1	11.45	0.00
Ammoniacal Nitrogen, Other		001.99	14	11.20	0.10
Method Group 001.XX PCT			15	11.21	0.11
TOTAL NITROGEN					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	11.31	0.04
Total Nitrogen, Salicylic	955.04d	010.12	1	11.27	0.00
Total Nitrogen, Combustion	993.13	010.60	20	11.25	0.19
Total Nitrogen, Other		010.99	3	11.09	0.08
Method Group 010.XX PCT			27	11.24	0.21
TOTAL PHOSPHATE					
Total Phosphate, Gravimetric Quimociac		020.10	1	52.67	0.00
Total Phosphate, Spectrometric	978.02	020.20	20	52.81	0.23
Total Phosphate, ICP	970.03	020.40	1	52.78	0.00
Total Phosphate, Other	993.13	020.99	1	52.93	0.00
Method Group 020.XX PCT			23	52.81	0.25
INSOLUBLE PHOSPHATE					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	9	0.17	0.02
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.17	0.00
Insoluble Phosphate, Automated	978.01	030.40	2	0.21	0.03
Insoluble Phosphate, Other		030.99	2	0.19	0.02
Method Group 030.XX PCT			14	0.17	0.05
INDIRECT AVAILABLE PHOSPHATE					
Indirect Available Phosphate, Spectrometric	960.02	040.20	11	52.64	0.11
Indirect Available Phosphate, Other		040.99	3	52.41	0.10
Method Group 040.XX PCT			14	52.63	0.19
DIRECT AVAILABLE PHOSPHATE					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	3	53.00	0.31
Direct Available Phosphate, Spectrometric	960.03D	041.20	1	52.38	0.00
Direct Available Phosphate, Automated	978.01	041.40	2	52.44	0.19
Direct Available Phosphate, ICP		041.50	3	52.11	0.76
Direct Available Phosphate, EDTA Extract	993.01	041.60	5	52.63	0.52

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Direct Available Phosphorus		041.99	1	52.10	0.00
Method Group 041.XX PCT			15	52.53	0.64
WATER SOLUBLE PHOSPHATE					
Water Soluble Phosphate, Spectrometric	970.01	048.20	13	47.50	0.20
Water Soluble Phosphate, Other		048.99	4	47.67	0.25
Method Group 048.XX PCT			17	47.56	0.26
SOLUBLE POTASH AS K₂O					
Soluble Potash, ICP(Oxalate)		050.50	3	0.11	0.01
Soluble Potash, ICP(Citrate)		050.51	1	0.12	0.00
Soluble Potash, Other		050.99	8	0.12	0.02
Method Group 050.XX PCT			12	0.11	0.01
FREE WATER					
Free Water, Vacuum Oven	965.08B	060.00	12	1.40	0.08
Free Water, Vacuum Desiccate	965.08A	060.10	2	1.90	0.01
Free Water, Other		060.99	4	1.32	0.27
Method Group 060.XX PCT			18	1.43	0.18
ACID SOLUBLE CALCIUM AS CaO					
Acid Soluble Calcium, ICP		101.30	15	0.78	0.05
Acid Soluble Calcium, Other		101.99	1	1.24	0.00
Method Group 101.XX PCT			16	0.78	0.07
ACID SOLUBLE MAGNESIUM AS MgO					
Acid Soluble Magnesium, Atomic Absorption	984.01	121.00	1	1.30	0.00
Acid Soluble Magnesium, ICP		121.30	15	1.31	0.07
Method Group 121.XX PCT			16	1.30	0.09
WATER SOLUBLE MAGNESIUM					
Water Soluble Magnesium, Other		131.99	1	0.09	0.00
Method Group 131.XX PCT			1	0.09	0.00
SULFATE SULFUR (S)					
Sulfur, Gravimetric	980.02(a)	144.01	1	1.49	0.00
Sulfur, Spectrometric		144.70	2	1.53	0.01
Sulfur, Other		144.99	14	1.50	0.03
Method Group 144.XX PCT			17	1.50	0.05
TOTAL SULFUR (S)					
Sulfur, Other		145.99	2	1.51	0.0
Method Group 145.XX PCT			2	1.51	0.0
TOTAL ARSENIC					
Total Arsenic, ICP	980.02(b)	151.02	6	21.2	1.0
Total Arsenic, Other		151.99	2	24.6	0.1

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ACID SOLUBLE BORON				
Acid Soluble Boron, Other	165.99	1	28	0.0
Method Group 165.XX PPM		1	28	0.0
TOTAL CADMIUM				
Total Cadmium, ICP	181.30	10	136.3	3.9
Total Cadmium, Other	181.99	1	127.0	0.0
Method Group 181.XX PPM		11	136.0	6.2
ALUMINUM AS Al₂O₃				
ICP, %		16	1.63	0.04
Water Soluble Chlorine, Other, %	190.99	1	1.64	0.00
Method Group 190.XX PCT		17	1.63	0.05
TOTAL CHROMIUM				
Total Chromium, ICP	191.30	8	539	19.5
Total Chromium, Other	191.99	1	525	0.0
Method Group 191.XX PPM		9	537	20.6
ACID SOLUBLE COBALT				
Acid Soluble Cobalt, ICP	202.30	8	4	0.9
Acid Soluble Cobalt, Other	202.99	1	4	0.0
Method Group 202.XX PPM		9	4	1.1
ACID SOLUBLE COPPER				
Acid Soluble Copper, ICP	221.30	6	67.8	1.6
Acid Soluble Copper, Other	221.99	1	0.0	0.0
Method Group 221.XX PPM		10	67.8	2.6
ACID SOLUBLE IRON AS Fe₂O₃				
Acid Soluble Iron, ICP	241.30	17	1.11	0.03
Method Group 241.XX PCT		18	1.12	0.05
TOTAL LEAD				
Total Lead, ICP	251.30	8	3	1.6
Total Lead, Other	251.99	1	1.7	0.0
Method Group 251.XX PPM		9	2	1.1
ACID SOLUBLE MANGANESE				
Acid Soluble Manganese, ICP	972.02a 261.30	1	180	0.0
Acid Soluble Manganese, Other	261.99	8	180	8.6
Method Group 261.XX PPM		9	180	8.4
TOTAL MERCURY				
Total Mercury, ICP	281.30	1	0.00	0.00
Method Group 281.XX PPM		1	0.04	0.00

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TOTAL MOLYBDENUM

Total Molybdenum, ICP	289.30	8	18	2.9
Total Molybdenum, Other	289.99	1	21	0.0
Method Group 289.XX PPM		9	18	3.6

TOTAL NICKEL

Total Nickel, ICP	291.30	8	257.3	2.4
Total Nickel, icp	291.99	1	249.0	0.0
Method Group 291.XX PPM		9	257.0	5.1

TOTAL SELENIUM

Total Selenium, ICP	301.30	4	1.5	1.4
Method Group 301.XX PPM		4	1.5	1.6

SODIUM AS Na₂O

Sodium, Other	311.99	9	0.15	0.02
Method Group 311.XX PCT		9	0.15	0.02

ACID SOLUBLE ZINC

Acid Soluble Zinc, Atomic Absorption	975.02	321.00	1	1977.5	0.0
Acid Soluble Zinc, ICP		321.30	7	1937.5	59.0
Acid Soluble Zinc, Other		321.99	2	1741.8	25.6
Method Group 321.XX %			10	1912.3	82.3

FLUORIDE

Volumetric	325.10		13	1.45	0.12
Distilled/Electrode	325.99		4	1.51	0.05
Method Group 325.XX PCT			17	1.48	0.14

001.10 Ammoniacal Nitrogen		
Lab	MgO distillation	
31	11.45	0.000
Median	11.45	0.000

001.99 Ammoniacal Nitrogen		
Lab	Other	
275	11.34	-1.303
Std Dev	11.30	-1.000
61	11.28	-0.713
24	11.27	-0.664
38	11.27	-0.615
24	11.25	-0.418
61	11.23	-0.221
275	11.21	-0.025
Median	11.20	0.000
34	11.20	0.025
23	11.20	0.074
23	11.20	0.074
Std Dev	11.10	1.000
310	11.10	1.008
32	11.09	1.156
79	11.06	1.401
32	10.94	2.631

001.XX Ammoniacal Nitrogen		
Lab	Total Method	
31	11.45	-2.680
275	11.34	-1.452
Std Dev	11.29	-1.000
61	11.28	-0.782
24	11.27	-0.726
38	11.27	-0.670
24	11.25	-0.447
61	11.23	-0.223
275	11.21	0.000
Median	11.21	0.000
34	11.20	0.056
23	11.20	0.112
23	11.20	0.112
Std Dev	11.12	1.000
310	11.10	1.173
32	11.09	1.340
79	11.06	1.619

32 10.94 3.015

010.11 Total Nitrogen		
Lab	Modified Comprehensive	
43	11.35	-1.049
Std Dev	11.35	-1.000
43	11.31	0.000
Median	11.31	0.000
Std Dev	11.26	1.000
219	11.24	1.631

010.12 Total Nitrogen		
Lab	Salicylic	
107	11.27	0.000
Median	11.27	0.000

010.60 Total Nitrogen		
Lab	Combustion	
49	11.61	-1.834
47	11.46	-1.064
Std Dev	11.44	-1.000
24	11.42	-0.885
66	11.42	-0.885
24	11.37	-0.628
219	11.34	-0.449
39	11.30	-0.256
79	11.29	-0.233
14	11.28	-0.141
14	11.26	-0.038
Median	11.25	0.000
63	11.24	0.038
29	11.22	0.141
9	11.20	0.256
77	11.20	0.269
80	11.10	0.757
Std Dev	11.05	1.000
99	11.03	1.116
315	11.03	1.141
64	10.97	1.423
137	10.95	1.526
103	10.94	1.577

010.99 Total Nitrogen		
Lab	Other	

325	11.15	-0.836
32	11.09	0.000
Median	11.09	0.000
Std Dev	11.00	1.000
32	10.94	1.844

010.XX Total Nitrogen		
Lab	Total Method	
49	11.61	-2.150
47	11.46	-1.266
24	11.42	-1.060
66	11.42	-1.060
Std Dev	11.41	-1.000
24	11.37	-0.766
43	11.35	-0.648
219	11.34	-0.560
43	11.31	-0.383
39	11.30	-0.339
79	11.29	-0.312
14	11.28	-0.206
14	11.26	-0.088
63	11.24	0.000
Median	11.24	0.000
219	11.24	0.029
29	11.22	0.118
9	11.20	0.250
77	11.20	0.265
325	11.15	0.512
80	11.10	0.825
32	11.09	0.913
Std Dev	11.07	1.000
99	11.03	1.237
315	11.03	1.266
64	10.97	1.590
137	10.95	1.708
103	10.94	1.767
32	10.94	1.796

020.10 Total Phosphate		
Lab	Gravimetric Quimociac	
310	52.67	0.000
Median	52.67	0.000

020.20 Total Phosphate		
Lab	Spectrometric	
31	53.31	-2.121
99	53.17	-1.523
Std Dev	53.05	-1.000
14	53.04	-0.967
43	53.03	-0.903
14	53.00	-0.797
24	52.97	-0.647
34	52.84	-0.113
23	52.83	-0.070
61	52.82	-0.028
275	52.82	-0.015
Median	52.81	0.000
43	52.81	0.015
275	52.80	0.053
23	52.78	0.164
24	52.77	0.186
61	52.68	0.592
32	52.62	0.848
9	52.59	0.955
79	52.59	0.976
Std Dev	52.58	1.000
32	52.56	1.083
315	52.33	2.086

020.40 Total Phosphate		
Lab	Automated	
137	52.78	0.000
Median	52.78	0.000

020.99 Total Phosphate		
Lab	Other	
325	52.93	0.000
Median	52.93	0.000

020.XX Total Phosphate		
Lab	Total Method	
31	53.31	-2.436
99	53.17	-1.754
14	53.04	-1.121
43	53.03	-1.048
Std Dev	53.02	-1.000
14	53.00	-0.926

24	52.97	-0.755
325	52.93	-0.585
34	52.84	-0.146
23	52.83	-0.097
61	52.82	-0.049
275	52.82	-0.034
43	52.81	0.000
Median	52.81	0.000
275	52.80	0.044
137	52.78	0.171
23	52.78	0.171
24	52.77	0.195
61	52.68	0.658
310	52.67	0.682
32	52.62	0.950
Std Dev	52.60	1.000
9	52.59	1.072
79	52.59	1.096
32	52.56	1.218
315	52.33	2.363

030.20		Insoluble Phosphate
Lab		Spectrometric
43	0.35	-8.129
43	0.33	-7.057
Std Dev	0.19	-1.000
61	0.19	-0.670
61	0.19	-0.670
23	0.17	0.000
Median	0.17	0.000
23	0.16	0.670
24	0.16	0.670
24	0.16	0.670
Std Dev	0.15	1.000
79	0.11	2.680

030.30		Insoluble Phosphate
Lab		Alka. Quimociac
31	0.17	0.000
Median	0.17	0.000

030.40		Insoluble Phosphate
Lab		Automated
9	0.25	-1.340

Std Dev	0.24	-1.000
Median	0.21	0.000
Std Dev	0.17	1.000
34	0.16	1.340

030.99		Insoluble Phosphate
Lab		Other
32	0.22	-1.340
Std Dev	0.21	-1.000
Median	0.19	0.000
Std Dev	0.16	1.000
32	0.16	1.340

030.XX		Insoluble Phosphate
Lab		Total Method
43	0.35	-4.645
43	0.33	-4.033
9	0.25	-2.106
32	0.22	-1.149
Std Dev	0.21	-1.000
61	0.19	-0.383
61	0.19	-0.383
23	0.17	0.000
31	0.17	0.000
Median	0.17	0.000
34	0.16	0.255
23	0.16	0.383
24	0.16	0.383
24	0.16	0.383
32	0.16	0.383
Std Dev	0.13	1.000
79	0.11	1.531

040.20		Indirect Available Phosphate
Lab		Spectrometric
31	53.14	-4.791
24	52.81	-1.660
Std Dev	52.74	-1.000
43	52.70	-0.569
9	52.69	-0.545
23	52.66	-0.237
61	52.64	0.000
Median	52.64	0.000
23	52.62	0.142

24	52.62	0.190
Std Dev	52.53	1.000
61	52.49	1.376
79	52.48	1.518
43	52.46	1.708

040.99		Indirect Available Phosphate
Lab		Other
34	52.68	-2.632
Std Dev	52.51	-1.000
32	52.41	0.000
Median	52.41	0.000
32	52.40	0.048

040.XX		Indirect Available Phosphate
Lab		Total Method
31	53.14	-3.261
24	52.81	-1.161
Std Dev	52.78	-1.000
43	52.70	-0.429
9	52.69	-0.414
34	52.68	-0.334
23	52.66	-0.207
61	52.64	-0.048
Median	52.63	0.000
23	52.62	0.048
24	52.62	0.080
61	52.49	0.875
79	52.48	0.970
Std Dev	52.47	1.000
43	52.46	1.097
32	52.41	1.416
32	52.40	1.447

041.10		Direct Available Phosphate
Lab		Gravimetric Quimociac
47	53.43	-1.422
Std Dev	53.30	-1.000
219	53.00	0.000
Median	53.00	0.000
Std Dev	52.69	1.000
107	52.61	1.258

041.20		Direct Available Phosphate
Lab		Spectrometric
47	52.38	0.000
Median	52.38	0.000

041.40		Direct Available Phosphate
Lab		Automated
39	52.70	-1.340
Std Dev	52.63	-1.000
Median	52.44	0.000
Std Dev	52.24	1.000
49	52.18	1.340

041.50		Direct Available Phosphate
Lab		ICP
63	52.53	-0.554
66	52.11	0.000
Median	52.11	0.000
Std Dev	51.35	1.000
80	50.50	2.126

041.60		Direct Available Phosphate
Lab		EDTA Extract
29	53.09	-0.900
219	53.01	-0.742
137	52.63	0.000
Median	52.63	0.000
77	52.32	0.598
Std Dev	52.11	1.000
103	49.82	5.408

041.99		Direct Available Phosphate
Lab		Other
325	52.10	0.000
Median	52.10	0.000

041.XX		Direct Available Phosphate
Lab		Total Method
47	53.43	-1.717
29	53.09	-1.071
Std Dev	53.05	-1.000
219	53.01	-0.916
219	53.00	-0.887
39	52.70	-0.315

137	52.63	-0.181
107	52.61	-0.153
63	52.53	0.000
Median	52.53	0.000
47	52.38	0.286
77	52.32	0.410
49	52.18	0.677
66	52.11	0.801
325	52.10	0.820
Std Dev	52.01	1.000
80	50.50	3.872
103	49.82	5.169

048.20 Water Soluble Phosphate Spectrometric		
Lab		
31	48.05	-2.756
9	47.79	-1.479
Std Dev	47.70	-1.000
23	47.68	-0.885
61	47.66	-0.784
61	47.65	-0.758
23	47.56	-0.278
14	47.50	0.000
Median	47.50	0.000
14	47.44	0.303
24	47.40	0.531
79	47.39	0.556
43	47.32	0.935
Std Dev	47.30	1.000
24	47.15	1.770
43	46.99	2.579

048.99 Water Soluble Phosphate Other		
Lab		
32	48.47	-3.226
Std Dev	47.92	-1.000
325	47.71	-0.131
Median	47.67	0.000
32	47.64	0.131
Std Dev	47.43	1.000
34	47.34	1.345

048.XX Water Soluble Phosphate Total Method		
Lab		

32	48.47	-4.302
31	48.05	-2.304
9	47.79	-1.117
Std Dev	47.77	-1.000
325	47.71	-0.705
23	47.68	-0.564
61	47.66	-0.470
61	47.65	-0.447
32	47.64	-0.400
23	47.56	0.000
Median	47.56	0.000
14	47.50	0.259
14	47.44	0.541
24	47.40	0.752
79	47.39	0.776
Std Dev	47.34	1.000
34	47.34	1.011
43	47.32	1.128
24	47.15	1.904
43	46.99	2.656

050.50 %K ₂ O Soluble Potash ICP(Oxalate)		
Lab		
23	0.12	-0.893
23	0.11	0.000
Median	0.11	0.000
Std Dev	0.10	1.000
99	0.10	1.787

050.51 %K ₂ O Soluble Potash ICP(Citrate)		
Lab		
137	0.12	0.000
Median	0.12	0.000

050.99 Soluble Potash Other		
Lab	%K ₂ O	
80	0.15	-1.948
61	0.15	-1.666
Std Dev	0.13	-1.000
61	0.13	-0.820
43	0.12	-0.309
Median	0.12	0.000
24	0.11	0.309
24	0.11	0.309

31	0.11	0.309
43	0.11	0.493

050.XX Soluble Potash Total Method		
Lab	%K ₂ O	
80	0.15	-3.805
61	0.15	-3.297
61	0.13	-1.776
Std Dev	0.12	-1.000
43	0.12	-0.857
137	0.12	-0.761
23	0.12	-0.254
Median	0.11	0.000
23	0.11	0.254
24	0.11	0.254
24	0.11	0.254
31	0.11	0.254
43	0.11	0.586
Std Dev	0.10	1.000
99	0.10	1.268

060.00 Free Water Vacuum Oven		
Lab		
32	1.59	-2.284
24	1.52	-1.492
Std Dev	1.48	-1.000
23	1.46	-0.761
23	1.45	-0.640
24	1.44	-0.518
32	1.42	-0.274
Median	1.40	0.000
31	1.38	0.274
34	1.36	0.457
9	1.36	0.457
Std Dev	1.32	1.000
43	1.29	1.310
43	1.28	1.431
79	1.19	2.528

060.10 Free Water Vacuum Desiccate		
Lab		
61	1.92	-1.340
Std Dev	1.91	-1.000
Median	1.90	0.000

Std Dev	1.89	1.000
61	1.88	1.340

060.99 Free Water Other		
Lab		
275	1.52	-0.731
275	1.50	-0.656
Median	1.32	0.000
14	1.15	0.656
14	1.14	0.693

060.XX Free Water Total Method		
Lab		
61	1.92	-3.242
61	1.88	-2.978
32	1.59	-1.026
Std Dev	1.58	-1.000
24	1.52	-0.596
275	1.52	-0.562
275	1.50	-0.430
23	1.46	-0.199
23	1.45	-0.132
24	1.44	-0.066
Median	1.43	0.000
32	1.42	0.066
31	1.38	0.364
34	1.36	0.463
9	1.36	0.463
43	1.29	0.926
43	1.28	0.993
Std Dev	1.28	1.000
79	1.19	1.588
14	1.15	1.886
14	1.14	1.952

101.30 Acid Soluble Calcium ICP		
Lab	%CaO	
32	0.89	-2.283
32	0.87	-1.787
Std Dev	0.83	-1.000
61	0.83	-0.993
24	0.82	-0.893
61	0.81	-0.596
24	0.79	-0.298

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34	0.78	-0.099
23	0.78	0.000
Median	0.78	0.000
9	0.76	0.298
43	0.75	0.564
14	0.75	0.596
23	0.75	0.596
43	0.74	0.608
14	0.74	0.695
31	0.73	0.903

101.99	Acid Soluble Calcium	
Lab	%CaO	Other
325	1.24	0.000
Median	1.24	0.000

101.XX	Acid Soluble Calcium	
Lab	%CaO	Total Method

325	1.24	-8.040
32	0.89	-1.977
32	0.87	-1.538
Std Dev	0.83	-1.000
61	0.83	-0.835
24	0.82	-0.747
61	0.81	-0.483
24	0.79	-0.220
34	0.78	-0.044
Median	0.78	0.000
23	0.78	0.044
9	0.76	0.308
43	0.75	0.543
14	0.75	0.571
23	0.75	0.571
43	0.74	0.582
14	0.74	0.659
31	0.73	0.844

121.00	Acid Soluble Magnesium	
Lab	%MgO	Atomic Absorption
219	1.30	0.000
Median	1.30	0.000

121.30	Acid Soluble Magnesium	
Lab	%MgO	ICP

151.XX	Total Arsenic	
Lab	Total Method	

18	24.70	-1.666
18	24.50	-1.552
Std Dev	23.53	-1.000
43	22.75	-0.555
64	22.06	-0.158
Median	21.78	0.000
31	21.50	0.158
43	20.95	0.472
61	20.50	0.728
Std Dev	20.02	1.000
24	14.50	4.150

165.99	Acid Soluble Boron	
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24	1.36	-0.776
24	1.36	-0.776
61	1.36	-0.776
32	1.35	-0.635
61	1.35	-0.635
34	1.33	-0.353
23	1.31	0.000
32	1.31	0.000
Median	1.31	0.000
9	1.30	0.141
23	1.30	0.141
14	1.26	0.705
14	1.26	0.705
31	1.24	0.917
Std Dev	1.23	1.000
43	1.14	2.398
43	1.13	2.468

121.XX	Acid Soluble Magnesium	
Lab	%MgO	Total Method

24	1.36	-0.832
24	1.36	-0.832
61	1.36	-0.832
32	1.35	-0.691
61	1.35	-0.691
34	1.33	-0.409
23	1.31	-0.056
32	1.31	-0.056
Median	1.30	0.000
219	1.30	0.056
9	1.30	0.085
23	1.30	0.085
14	1.26	0.649
14	1.26	0.649
31	1.24	0.860
Std Dev	1.23	1.000
43	1.14	2.341
43	1.13	2.412

144..01	Sulfate Sulfur (S)	
Lab	Gravimetric	

79	1.49	0.000
Median	1.49	0.000

181.XX	Total Cadmium	
Lab	PPM	Total Method

275	142.08	-1.189
Std Dev	141.12	-1.000
61	139.50	-0.684
61	139.00	-0.586
64	136.56	-0.108
275	136.53	-0.104
18	136.00	0.000
Median	136.00	0.000
18	134.90	0.215
31	132.65	0.655
Std Dev	130.88	1.000
43	129.20	1.330

144.70	Sulfur	
Lab	Spectrometric	

14	1.54	-1.340
Std Dev	1.54	-1.000
Median	1.53	0.000
Std Dev	1.52	1.000
14	1.52	1.340

144.99	Sulfate Sulfur (S)	
Lab	Other	

24	1.57	-2.073
325	1.56	-1.787
Std Dev	1.53	-1.000
32	1.53	-0.929
24	1.51	-0.357
9	1.51	-0.286
23	1.51	-0.214
23	1.50	-0.071
Median	1.50	0.000
32	1.50	0.071
34	1.49	0.214
61	1.47	0.786
Std Dev	1.46	1.000
31	1.46	1.072
61	1.45	1.501
275	1.38	3.402
275	1.36	3.976

144.XX	Sulfate Sulfur (S)	
Lab	Total Method	

24	1.57	-1.876
325	1.56	-1.608
14	1.54	-1.072
Std Dev	1.54	-1.000
32	1.53	-0.804
14	1.52	-0.536
24	1.51	-0.268
9	1.51	-0.201
23	1.51	-0.134
23	1.50	0.000
Median	1.50	0.000
32	1.50	0.134
34	1.49	0.268
79	1.49	0.268

190.XX	Aluminum	
Lab	%Al ₂ O ₃	Total Method

14	1.71	-2.144
14	1.70	-1.876
9	1.70	-1.742
Std Dev	1.67	-1.000
61	1.65	-0.402
32	1.64	-0.268
32	1.64	-0.134
31	1.64	-0.134
24	1.63	0.000
34	1.63	0.000
61	1.63	0.000
Median	1.63	0.000

61	1.47	0.804
Std Dev	1.46	1.000
31	1.46	1.072
61	1.45	1.474
275	1.38	3.256
275	1.36	3.795

145.99	Total Sulfur (S)	
Lab	Other	

43	1.52	-1.340
Std Dev	1.52	-1.000
Median	1.51	0.000
Std Dev	1.51	1.000
43	1.50	1.340

145.XX	Total Sulfur (S)	
Lab	Total Method	

43	1.52	-1.340
Std Dev	1.52	-1.000
Median	1.51	0.000
Std Dev	1.51	1.000
43	1.50	1.340

151.30	Total Arsenic	
Lab	ICP	

43	22.75	-1.567
Std Dev	22.20	-1.000
64	22.06	-0.853
31	21.50	-0.283
Median	21.23	0.000
43	20.95	0.283
61	20.50	0.745
Std Dev	20.25	1.000
24	14.50	6.912

151.99	Total Arsenic	
Lab	Other	

18	24.70	-1.340
Std Dev	24.67	-1.000
Median	24.60	0.000
Std Dev	24.53	1.000
18	24.50	1.340

191.XX	Total Chromium	
Lab	PPM	Total Method

61	564.50	-1.628
61	557.00	-1.184
Std Dev	553.89	-1.000
64	547.63	-0.629
18	541.25	-0.252
18	537.00	0.000
Median	537.00	0.000
31	525.70	0.669
24	525.00	0.711
Std Dev	520.11	1.000
43	518.50	1.095
43	516.50	1.214

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Lab	PPM	Other
24	27.70	0.000
Median	27.70	0.000

65.XX, ppm		Acid Soluble Boron
Lab	PPM	Total Method
24	27.70	0.000
Median	27.70	0.000

181.30		Total Cadmium
Lab	PPM	ICP
275	142.08	-1.505
Std Dev	140.13	-1.000
61	139.50	-0.837
61	139.00	-0.707
64	136.56	-0.074
275	136.53	-0.069
Median	136.27	0.000
18	136.00	0.069
18	134.90	0.354
31	132.65	0.936
Std Dev	132.40	1.000
43	129.20	1.831
43	124.81	2.967

181.99		Total Cadmium
Lab	PPM	Other
24	127.00	0.000
Median	127.00	0.000

64	70.27	-1.545
Std Dev	69.39	-1.000
31	68.39	-0.382
18	68.25	-0.295
61	68.00	-0.140
Median	67.78	0.000
18	67.55	0.140
61	66.50	0.791
Std Dev	66.16	1.000
43	65.00	1.722
43	64.50	2.032

221.99		Acid Soluble Copper
Lab	PPM	Other
24	65.20	0.000
Median	65.20	0.000

221.XX		Acid Soluble Copper
Lab	PPM	Total Method
219	76.33	-4.051
64	70.27	-1.179
Std Dev	69.89	-1.000
31	68.39	-0.291
18	68.25	-0.225
61	68.00	-0.107
Median	67.78	0.000
18	67.55	0.107
61	66.50	0.604
Std Dev	65.66	1.000
24	65.20	1.219
43	65.00	1.314

24	127.00	1.759
43	124.81	2.188

190.00		Aluminum
Lab	%Al ₂ O ₃	ICP
14	1.71	-2.082
14	1.70	-1.821
9	1.70	-1.691
Std Dev	1.67	-1.000
61	1.65	-0.390
32	1.64	-0.260
32	1.64	-0.130
24	1.63	0.000
34	1.63	0.000
61	1.63	0.000
Median	1.63	0.000
23	1.62	0.260
24	1.62	0.260
Std Dev	1.59	1.000
23	1.59	1.041
275	1.59	1.067
43	1.53	2.602
43	1.52	2.992
275	1.48	3.825

190.99		Aluminum
Lab	%Al ₂ O ₃	Atomic Absorption
31	1.64	0.000
Median	1.64	0.000

32	1.11	0.000
Median	1.11	0.000
61	1.11	0.149
23	1.10	0.298
43	1.09	0.596
9	1.09	0.744
23	1.08	0.893
Std Dev	1.08	1.000
61	1.08	1.042
43	1.06	1.638
31	1.04	2.084

241.XX		Acid Soluble Iron
Lab	%Fe ₂ O ₃	Total Method
275	1.33	-5.739
275	1.27	-4.157
219	1.19	-2.039
Std Dev	1.15	-1.000
24	1.15	-0.915
14	1.14	-0.654
14	1.13	-0.392
32	1.13	-0.261
24	1.12	-0.131
34	1.12	-0.131
Median	1.12	0.000
32	1.11	0.131
61	1.11	0.261
23	1.10	0.392
43	1.09	0.654
9	1.09	0.784
23	1.08	0.915

23	1.62	0.268
24	1.62	0.268
Std Dev	1.59	1.000
23	1.59	1.072
275	1.59	1.099
43	1.53	2.680
43	1.52	3.082
275	1.48	3.940

191.30		Total Chromium
Lab	PPM	ICP
61	564.50	-1.304
Std Dev	558.58	-1.000
61	557.00	-0.919
64	547.63	-0.437
18	541.25	-0.109
Median	539.13	0.000
18	537.00	0.109
31	525.70	0.690
Std Dev	519.67	1.000
43	518.50	1.060
43	516.50	1.163

191.99		Total Chromium
Lab	PPM	Other
24	525.00	0.000
Median	525.00	0.000

31	2.35	0.210
64	2.13	0.352
61	2.00	0.435
61	2.00	0.435

251.99		Total Lead
Lab	PPM	Other
24	1.70	0.000
Median	1.70	0.000

251.XX		Total Lead
Lab	PPM	Total Method
18	7.35	-5.583
18	7.10	-5.304
Std Dev	3.25	-1.000
43	3.20	-0.949
43	3.00	-0.726
31	2.35	0.000
Median	2.35	0.000
64	2.13	0.246
61	2.00	0.391
61	2.00	0.391
24	1.70	0.726

261.30		Acid Soluble Manganese
Lab	PPM	ICP
31	179.70	0.000
Median	179.70	0.000

261.99		Acid Soluble Manganese
Lab	PPM	Other

202.30		Acid Soluble Cobalt
Lab	PPM	ICP

202.99		Acid Soluble Cobalt
Lab	PPM	Other
24	4.28	0.000
Median	4.28	0.000

202.XX		Acid Soluble Cobalt
Lab	PPM	Total Method
61	5.00	-1.103
61	5.00	-1.103
64	4.92	-1.009
Std Dev	4.91	-1.000
24	4.28	-0.309
43	4.00	0.000
43	4.00	0.000
Median	4.00	0.000
18	3.70	0.331
18	3.70	0.331
31	3.19	0.893

221.00		Acid Soluble Copper
Lab	PPM	Atomic Absorption
219	1.19	0.000
Median	1.19	0.000

221.30		Acid Soluble Copper
Lab	PPM	ICP

43	192.50	-1.854
43	191.00	-1.637
219	187.75	-1.166
Std Dev	186.60	-1.000
61	180.00	-0.043
31	179.70	0.000
Median	179.70	0.000
24	179.00	0.101
61	178.50	0.174
Std Dev	172.80	1.000
18	172.65	1.021
18	171.30	1.217

281.30		Total Mercury
Lab	PPM	ICP
24	0.04	0.000
Median	0.04	0.000

281.XX		Total Mercury
Lab	PPM	Total Method
24	0.04	0.000
Median	0.04	0.000

289.30		Total Molybdenum
Lab	PPM	ICP

289.99		Total Molybdenum
Lab	PPM	Other
24	21.30	0.000
Median	21.30	0.000

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43 64.50 1.551

241.30	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	ICP

275 1.33 -6.685
 275 1.27 -4.884
 24 1.15 -1.191
Std Dev 1.14 -1.000
 14 1.14 -0.893
 14 1.13 -0.596
 32 1.13 -0.447
 24 1.12 -0.298
 34 1.12 -0.298

18 13.25 1.611

291.30	Total Nickel	
Lab	PPM	ICP

18

291.99	Total Nickel	
Lab	PPM	Other

24 249.00 0.000
Median 249.00 0.000

291.XX	Total Nickel	
Lab	PPM	Total Method

18 263.65 -1.591
Std Dev 261.18 -1.000
 18 260.75 -0.897
 43 258.00 -0.239
 64 257.64 -0.152
 43 257.00 0.000
Median 257.00 0.000
 61 256.50 0.120
Std Dev 252.82 1.000
 31 252.40 1.101
 61 249.50 1.795
 24 249.00 1.914

301.30	Total Selenium	
Lab	PPM	ICP

18 2.85 -0.998
 18 2.30 -0.591
Median 1.50 0.000
 24 0.70 0.591
 61 0.40 0.813

301.XX	Total Selenium	
Lab	PPM	Total Method

18 2.85 -0.998
 18 2.30 -0.591
Median 1.50 0.000
 24 0.70 0.591
 61 0.40 0.813

311.99	Sodium	
Lab	%Na ₂ O	Other

23 0.17 -1.072

Std Dev 1.08 1.000
 61 1.08 1.046
 43 1.06 1.569
 31 1.04 1.961

251.30	Total Lead	
Lab	PPM	ICP

18 7.35 -3.015
 18 7.10 -2.854
Std Dev 4.23 -1.000
 43 3.20 -0.339
 43 3.00 -0.210
Median 2.68 0.000

Std Dev 0.17 -1.000

61 0.17 -0.804
 61 0.16 -0.536
 24 0.15 0.000
 24 0.15 0.000
 31 0.15 0.000
Median 0.15 0.000
 23 0.14 0.804
Std Dev 0.13 1.000
 43 0.13 1.187
 43 0.12 1.649

311.XX	Sodium	
Lab	%Na ₂ O	Total Method

23 0.17 -1.072
Std Dev 0.17 -1.000
 61 0.17 -0.804
 61 0.16 -0.536
 24 0.15 0.000
 24 0.15 0.000
 31 0.15 0.000
Median 0.15 0.000
 23 0.14 0.804
Std Dev 0.13 1.000
 43 0.13 1.187
 43 0.12 1.649

321.00	Acid Soluble Zinc	
Lab	PPM	Atomic Absorption

219 1977.50 0.000
Median 1977.50 0.000

321.30	Acid Soluble Zinc	
Lab	PPM	ICP

61 1975.00 -0.636
 31 1969.00 -0.534
 61 1950.00 -0.212
 64 1937.50 0.000
Median 1937.50 0.000
 24 1887.00 0.857
Std Dev 1878.54 1.000
 18 1874.00 1.077
 18 1873.56 1.085

43 192.50 -1.511
 43 191.00 -1.337
Std Dev 188.10 -1.000
 219 187.75 -0.959
 61 180.00 -0.058
Median 179.50 0.000
 24 179.00 0.058
 61 178.50 0.116
 18 172.65 0.796
 18 171.30 0.953

261.XX	Acid Soluble Manganese	
Lab	PPM	Total Method

321.99	Acid Soluble Zinc	
Lab	PPM	Other

43 1776.00 -1.340
Std Dev 1767.31 -1.000
Median 1741.75 0.000
Std Dev 1716.19 1.000
 43 1707.50 1.340

321.XX	Acid Soluble Zinc	
Lab	PPM	Total Method

219 1977.50 -0.965
 61 1975.00 -0.928
 31 1969.00 -0.840
 61 1950.00 -0.558
 64 1937.50 -0.374
Median 1912.25 0.000
 24 1887.00 0.374
 18 1874.00 0.566
 18 1873.56 0.572
Std Dev 1844.65 1.000
 43 1776.00 2.016
 43 1707.50 3.029

325.10	Fluoride	
Lab	%	Electrode

32 1.71 -2.291
 32 1.70 -2.161
 23 1.57 -1.037
 31 1.56 -0.951
 23 1.55 -0.908
 24 1.48 -0.303
 79 1.45 0.000
Median 1.45 0.000
 34 1.44 0.043
 275 1.40 0.363
 14 1.40 0.389
 24 1.40 0.389
 14 1.39 0.475
 275 1.34 0.934

325.99	Fluoride	
Lab	%	Other

61 1.57 -1.091
 61 1.53 -0.427

289.XX	Total Molybdenum	
Lab	PPM	Total Method

24 21.30 -1.119
Std Dev 20.95 -1.000
 64 20.03 -0.689
 43 18.15 -0.051
 43 18.00 0.000
 61 18.00 0.000
Median 18.00 0.000
 61 17.50 0.170
Std Dev 15.05 1.000
 31 14.20 1.289
 18 13.95 1.374

Median 1.51 0.000
 325 1.49 0.427
 9 1.42 1.708

325.XX	Fluoride	
Lab	%	Total Method

32 1.71 -2.028
 32 1.70 -1.895
 23 1.57 -0.749
 61 1.57 -0.749
 31 1.56 -0.661
 23 1.55 -0.617
 61 1.53 -0.441
 325 1.49 -0.044
 24 1.48 0.000
Median 1.48 0.000
 79 1.45 0.309
 34 1.44 0.353
 9 1.42 0.551
 275 1.40 0.679
 14 1.40 0.705
 24 1.40 0.705
 14 1.39 0.793
 275 1.34 1.261