

MAGRUDER - Fertilizer Check Sample No. - 200506 Grade 6-2-0 Biosolids

- Pass 1 Results for 68 Labs - - Pass 2 Results for 67 Labs -

Method	AOAC Ref.	Method Code	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups
Ammoniacal Nitrogen, Other		001.99	2	0.50	0.35	0.02	2	0.50	0.35	0.02
Nitrate Nitrogen, Other		002.99	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Water Insoluble Nitrogen, Meth I	945.01	003.10	2	5.02	0.13	0.13	2	5.02	0.13	0.13
Water Insoluble Nitrogen, Other		003.99	1	5.04	0.01	0.01	1	5.04	0.01	0.01
Method Group 003.XX PCT			3	5.02	0.10	0.09	3	5.02	0.10	0.09
Nitrogen From Urea, Other		005.99	1	1.59	0.00	0.00	1	1.59	0.00	0.00
Ammon & Nitrate N, Devarda	892.01	009.10	1	2.98	0.20	0.28	1	2.98	0.20	0.28
Total Nitrogen, Modified Comprehensive	978.02	010.11	4	6.28	0.26	0.09	4	6.28	0.26	0.09
Total Nitrogen, Salicylic	955.04D	010.12	2	6.34	0.21	0.02	2	6.34	0.21	0.02
Total Nitrogen, Combustion		010.60	48	6.33	0.11	0.05	45	6.32	0.10	0.04
Total Nitrogen, Other		010.99	3	6.03	0.10	0.02	3	6.03	0.10	0.02
Method Group 010.XX PCT			59	6.31	0.16	0.05	56	6.30	0.15	0.05
Total Phosphate, Grav Quimociac	962.02	020.10	5	4.59	0.20	0.06	5	4.59	0.20	0.06
Total Phosphate, Spectrometric	958.01	020.20	13	5.47	0.54	0.06	12	5.52	0.52	0.05
Total Phosphate, Automated	978.01	020.40	6	5.11	0.39	0.21	5	5.12	0.36	0.06
Total Phosphate, ICP		020.50	4	5.40	0.42	0.07	4	5.40	0.42	0.07
Method Group 020.XX PCT			28	5.22	0.55	0.09	27	5.23	0.55	0.06
Insoluble Phosphate, Grav Quimociac ...	963.03C	030.10	2	0.20	0.12	0.01	2	0.20	0.12	0.01
Insoluble Phosphate, Automated	978.01	030.40	1	0.59	0.00	0.00	1	0.59	0.00	0.00
Insoluble Phosphate, ICP		030.50	1	0.38	0.09	0.13	1	0.38	0.09	0.13
Insoluble Phosphate, Other		030.99	1	0.33	0.01	0.01	1	0.33	0.01	0.01
Method Group 030.XX PCT			5	0.34	0.17	0.03	4	0.33	0.19	0.01
InDir Available Phosphate, Grav Quim ..	960.02	040.10	2	4.42	0.19	0.06	2	4.42	0.19	0.06
InDir Available Phosphate, Automated ..	960.02	040.40	1	4.42	0.02	0.03	1	4.42	0.02	0.03
InDir Available Phosphate, Other		040.99	1	5.29	0.06	0.09	1	5.29	0.06	0.09
Method Group 040.XX PCT			4	4.64	0.42	0.06	4	4.64	0.42	0.06
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	12	4.27	0.13	0.05	11	4.29	0.10	0.04
Dir Available Phosphate, Spectrometric	960.03D	041.20	3	4.38	0.87	0.07	3	4.38	0.87	0.07
Dir Available Phosphate, Automated	978.01	041.40	4	4.54	0.23	0.05	4	4.54	0.23	0.05
Dir Available Phosphate, ICP		041.50	8	4.97	0.26	0.10	8	4.97	0.26	0.10
Dir Available Phosphate, EDTA Extract .	993.01	041.60	8	4.59	0.31	0.04	8	4.59	0.31	0.04
Method Group 041.XX PCT			38	4.55	0.45	0.06	36	4.61	0.37	0.06
Water Soluble Phosphate, Spectrometric	970.01	048.20	1	0.12	0.00	0.00	1	0.12	0.00	0.00
Water Soluble Phosphate, ICP		048.50	1	2.10	0.02	0.03	1	2.10	0.02	0.03
Method Group 048.XX PCT			2	1.11	1.14	0.01	2	1.11	1.14	0.01
Soluble Potash, STPB Oxalate	958.02	050.00	1	0.50	0.00	0.00	1	0.50	0.00	0.00
Soluble Potash, AA (Oxalate)		050.30	1	0.51	0.00	0.01	1	0.51	0.00	0.01
Soluble Potash, ICP (Oxalate)		050.50	6	0.48	0.11	0.03	6	0.48	0.11	0.03
Soluble Potash, ICP (Citrate)		050.51	5	0.54	0.05	0.02	5	0.54	0.05	0.02

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Soluble Potash, Flame (Citrate)	983.02(b)	050.61	1	0.64	0.11	0.15	1	0.64	0.11	0.15
Soluble Potash, Other		050.99	5	0.55	0.07	0.01	5	0.55	0.07	0.01
Method Group 050.XX PCT			19	0.52	0.09	0.02	18	0.52	0.08	0.02
Free Water, Vacuum Oven	965.08B	060.00	6	5.14	1.21	0.06	6	5.14	1.21	0.06
Acid Soluble Calcium, AA	945.04	101.00	12	1.63	0.08	0.06	12	1.63	0.08	0.06
Acid Soluble Calcium, ICP		101.30	23	1.61	0.10	0.04	22	1.62	0.10	0.03
Acid Soluble Calcium, Titrimetric	945.03	101.70	1	1.48	0.00	0.00	1	1.48	0.00	0.00
Acid Soluble Calcium, Other		101.99	1	1.65	0.01	0.02	1	1.65	0.01	0.02
Method Group 101.XX PCT			37	1.62	0.10	0.04	34	1.62	0.09	0.03
Acid Soluble Magnesium, ICP		121.30	14	0.49	0.06	0.01	14	0.49	0.06	0.01
Acid Soluble Magnesium, Other		121.99	1	0.38	0.00	0.01	1	0.38	0.00	0.01
Method Group 121.XX PCT			15	0.48	0.06	0.01	15	0.48	0.06	0.01
Sulfur, Other		144.99	7	0.77	0.16	0.02	6	0.80	0.14	0.01
Arsenic, Atomic Absorption		151.00	2	3.52	0.69	0.85	2	3.52	0.69	0.85
Arsenic, ICP		151.30	3	4.47	3.39	0.82	3	4.47	3.39	0.82
Arsenic, Other		151.99	1	11.50	0.71	1.00	1	11.50	0.71	1.00
Method Group 151.XX PPM			6	5.32	3.73	0.86	6	5.32	3.73	0.86
Acid Soluble Boron, Other		165.99	4	0.016	0.016	0.003	3	0.018	0.019	0.000
Cadmium, Atomic Absorption		181.00	2	0.95	0.04	0.06	2	0.95	0.04	0.06
Cadmium, ICP		181.30	13	2.79	1.99	0.24	13	2.79	1.99	0.24
Cadmium, Other		181.99	1	2.35	0.21	0.30	1	2.35	0.21	0.30
Method Group 181.XX PPM			16	2.53	1.89	0.22	15	2.58	1.94	0.19
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	1	0.30	0.00	0.00	1	0.30	0.00	0.00
Water Soluble Chlorine, Other		190.99	1	0.23	0.00	0.00	1	0.23	0.00	0.00
Method Group 190.XX PCT			2	0.27	0.04	0.00	2	0.27	0.04	0.00
Chromium, ICP		191.30	12	185.07	13.02	3.33	12	185.07	13.02	3.33
Method Group 191.XX PPM			12	185.07	13.02	3.33	12	185.07	13.02	3.33
Acid Soluble Cobalt, ICP	965.11	202.30	12	8.10	3.13	0.55	11	7.92	3.18	0.33
Method Group 202.XX PPM			12	8.10	3.13	0.55	11	7.92	3.18	0.33
Acid Soluble Copper, Atomic Absorption	975.01	221.00	7	0.0218	0.0023	0.0006	7	0.0218	0.0023	0.0006
Acid Soluble Copper, ICP		221.30	18	0.0217	0.0013	0.0006	17	0.0216	0.0013	0.0005
Acid Soluble Copper, Other		221.99	2	0.0238	0.0022	0.0025	2	0.0238	0.0022	0.0025
Method Group 221.XX PCT			28	0.0220	0.0019	0.0008	26	0.0217	0.0016	0.0006
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	17	5.36	0.42	0.15	17	5.36	0.42	0.15
Acid Soluble Iron, ICP		241.30	24	5.49	0.43	0.10	24	5.49	0.43	0.10
Acid Soluble Iron, Other		241.99	2	5.13	0.24	0.20	2	5.13	0.24	0.20
Method Group 241.XX PCT			43	5.42	0.42	0.12	42	5.43	0.42	0.11
Lead, Atomic Absorption		251.00	2	38.89	4.69	4.42	2	38.89	4.69	4.42
Lead, ICP		251.30	10	40.42	4.70	1.59	9	40.86	4.59	0.94

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Method Group 251.XX PPM			13	41.34	6.07	1.96	12	41.74	6.05	1.51
Acid Soluble Manganese, AA	972.02a	261.00	1	0.040	0.000	0.000	1	0.040	0.000	0.000
Acid Soluble Manganese, ICP	972.02a	261.30	13	0.045	0.003	0.001	13	0.045	0.003	0.001
Acid Soluble Manganese, Spectrometric .	940.02	261.50	1	0.044	0.001	0.001	1	0.044	0.001	0.001
Method Group 261.XX PCT			15	0.045	0.003	0.001	15	0.045	0.003	0.001
Mercury, Atomic Absorption		281.00	1	0.43	0.09	0.13	1	0.43	0.09	0.13
Mercury, Other		281.99	1	0.18	0.00	0.00	1	0.18	0.00	0.00
Method Group 281.XX PPM			2	0.30	0.15	0.07	2	0.30	0.15	0.07
Molybdenum, ICP		289.30	12	13.95	1.91	1.12	12	13.95	1.91	1.12
Molybdenum, Other		289.99	1	11.55	1.48	2.10	1	11.55	1.48	2.10
Method Group 289.XX PPM			13	13.77	1.97	1.19	13	13.77	1.97	1.19
Nickel, ICP		291.30	14	27.80	4.01	1.31	14	27.80	4.01	1.31
Nickel, Other		291.99	1	28.75	0.92	1.30	1	28.75	0.92	1.30
Method Group 291.XX PPM			15	27.86	3.88	1.31	15	27.86	3.88	1.31
Selenium, Atomic Absorption		301.00	1	2.53	0.47	0.67	1	2.53	0.47	0.67
Selenium, ICP		301.30	4	4.92	4.39	0.56	4	4.92	4.39	0.56
Method Group 301.XX PPM			5	4.44	4.01	0.58	5	4.44	4.01	0.58
Sodium, Other		311.99	7	0.18	0.10	0.02	6	0.15	0.04	0.01
Method Group 311.XX PCT			7	0.18	0.10	0.02	6	0.15	0.04	0.01
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	6	0.038	0.005	0.002	6	0.038	0.005	0.002
Acid Soluble Zinc, Zincon Ion Exchange	973.01	321.20	1	0.041	0.003	0.004	1	0.041	0.003	0.004
Acid Soluble Zinc, ICP		321.30	18	0.039	0.003	0.001	17	0.039	0.003	0.001
Acid Soluble Zinc, Other		321.99	2	0.040	0.002	0.002	2	0.040	0.002	0.002
Method Group 321.XX PCT			27	0.039	0.004	0.002	25	0.039	0.003	0.001

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.99 PCT			Meth: 010.11 PCT			Meth: 010.60 PCT			Meth: 010.99 PCT			Meth: 010.XX PCT		
Ammoniacal Nitrogen			Total Nitrogen			Total Nitrogen			Total Nitrogen			<u>Total Nitrogen</u>		
<u>Other</u>			<u>Modified Comprehensi</u>			<u>Combustion</u>			<u>Other</u>					
409	0.80	.87	415	6.68	1.54	024	6.36	.46	397	6.15	1.21	162	6.35	.36
Avg	0.50		Avg	6.28		142	6.35	.42	Avg	6.03		232	6.35	.35
027	0.19	-.87	405	6.23	-.24	049	6.35	.42	368	6.00	-.28	055	6.32	.27
Meth: 002.99 PCT			029			425			300			106		
Nitrate Nitrogen			090			096			354			409		
<u>Other</u>			Meth: 010.12 PCT			162			Meth: 010.XX PCT			027		
027	0.00	.00	Total Nitrogen			232			Total Nitrogen			377		
Meth: 003.10 PCT			<u>Salicylic</u>			106			351			406		
Water Insoluble Nitr			137			409			6.90 s			131		
<u>Meth I</u>			Avg			027			6.73 s			330		
029	5.12	.84	211			406			6.76 A			381		
Avg	5.02		254			330			6.68			073		
090	4.92	-.90	5.57 S			131			2.66			029		
Meth: 003.99 PCT			Meth: 010.60 PCT			377			1.59			426		
Water Insoluble Nitr			Total Nitrogen			073			1.53			393		
<u>Other</u>			<u>Combustion</u>			055			1.37			157		
027	5.04	.71	351			381			6.44 R			324		
Meth: 003.XX PCT			361			029			6.47 R			405		
Water Insoluble Nitr			390			095			1.35			6.23		
029	5.12	1.03	262			426			1.33			-.54		
027	5.04	.12	043			393			1.22			-.66		
Avg	5.02		6.44 R			157			.80			-.66		
090	4.92	-1.20	6.47 R			324			.80			-.80		
Meth: 005.99 PCT			247			324			.72			-.89		
<u>Other</u>			028			157			.71			-.90		
027	1.59	.00	6.49			324			.66			-1.00		
Meth: 009.10 PCT			025			114			.63			-1.03		
Ammon & Nitrate N			307			023			.61			-1.11		
<u>Devarda</u>			042			009			.56			-1.24		
030	2.98	.71	6.41			035			.46			-1.54		
* X=Excluded from lab performance			037			233			.44			-1.67		
S/s=Screened Outlier			177			325			.43			-2.02		
R=Duplicate			136			041			.43			-2.32		
Range too large			007			018			.42			-2.50		
A=Analysis beyond 3-s limits			369			428			.40			-4.95		
			6.39			040			.40			-41.78		
			.92			422			.39					
			.82			024			.39					
			.77			057			.37					
			.74			425								
			.67			095								
			.60			425								
			.58			095								
			.48			425								
			.47			096								
			.47			096								

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	
Meth: 041.60 PCT			Meth: 041.XX PCT			Meth: 050.00 PCT			Meth: 050.99 PCT			Meth: 060.00 PCT			
<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			Soluble Potash			Soluble Potash			Free Water			
<u>EDTA Extract</u>			049 4.33 -.77			<u>STPB Oxalate</u>			<u>Other</u>			<u>Vacuum Oven</u>			
377	5.15	1.82	040	4.32	-.79	136	0.50	.00	131	0.61	.97	409	5.03	-.10	
018	4.79	.63	351	4.32	-.79	Meth: 050.30 PCT			325	0.60	.83	096	5.00	-.12	
037	4.73	.49	055	4.32	-.80	Soluble Potash			397	0.55	.10	247	4.18	-.80	
057	4.68	.28	009	4.31	-.83	<u>AA (Oxalate)</u>			Avg	0.55		007	3.55	-1.31	
028	4.60	.02	073	4.27	-.93	428	0.51	-.71	330	0.54	-.17	Meth: 101.00 PCT			
Avg	4.59		029	4.25	-.97	Meth: 050.50 PCT			232	0.43 X	-1.68	Acid Soluble Calcium			
351	4.32	-.89	043	4.21	-1.08	Soluble Potash			Meth: 050.XX PCT			<u>AA</u>			
073	4.27	-1.06	211	4.21	-1.09	<u>ICP (Oxalate)</u>			292	0.68	1.92	028	2.04 s	4.88	
043	4.21	-1.25	136	4.20	-1.10	292	0.68	1.73	028	0.64 R	1.69	030	1.71	1.33	
095	2.40 s	-7.14	027	4.20	-1.12	422	0.52	.41	361	0.61	1.13	351	1.74	1.24	
Meth: 041.XX PCT			028	4.10	-1.38	324	0.49	.14	131	0.61	1.11	137	1.72	1.01	
<u>Dir Available Phosph</u>			057	3.99	-1.68	Avg	0.48		325	0.60	1.00	055	1.68	.74	
254	5.27	1.75	260	3.67 R	-2.55	106	0.47	-.25	096	0.56	.46	040	1.66	.33	
023	5.20	1.55	030	3.26 A	-3.61	420	0.36	-1.03	377	0.55	.39	262	1.65	.22	
361	5.18	1.51	095	2.40 s	-5.92	354	0.35	-1.10	397	0.55	.37	177	1.64	.16	
377	5.15	1.43	025	2.09 s	-6.74	Meth: 050.51 PCT			330	0.54	.22	Avg	1.63		
325	5.13	1.38	393	2.08 s	-6.76	Soluble Potash			422	0.52	.09	043	1.63	-.36	
137	5.11	1.33	393	2.08 s	-6.77	<u>ICP (Citrate)</u>			428	0.52	.09	095	1.60	-.60	
360	5.02	1.12	Meth: 048.20 PCT			361 0.61 1.45			009	0.51	-.17	233	1.54	-1.14	
106	5.03	1.12	Water Soluble Phosph			096 0.56 .28	136 0.50 -.22			324	0.49	-.36	397	1.52	-1.40
043	5.01	1.08	<u>Spectrometric</u>			377 0.55 .15	393 0.50 -.51			106	0.47	-.71	029	1.52	-1.65
007	4.92	.82	096	0.12	.00	Avg	0.54		393	0.50	-.51	Meth: 101.30 PCT			
009	4.90	.78	Meth: 048.50 PCT			009 0.51 -.82	106 0.47 -.71			232	0.43 X	-1.03	Acid Soluble Calcium		
415	4.86	.66	Water Soluble Phosph			393 0.50 -1.27	232 0.43 X -1.03			Meth: 060.00 PCT			<u>ICP</u>		
018	4.79	.46	<u>ICP</u>			Meth: 050.61 PCT			354	0.35	-2.01	320	2.31 s	7.37	
409	4.76	.40	426	2.10	.71	Soluble Potash			018	0.00 s	-6.29	422	2.07 s	4.68	
037	4.73	.35	Meth: 048.XX PCT			<u>Flame (Citrate)</u>			Meth: 060.00 PCT			042	2.03 s	4.41	
029	4.68	.22	Water Soluble Phosph			028 0.64 .71	Free Water			Free Water			035	1.78	1.64
057	4.68	.17	426	2.10	.87	Avg			Vacuum Oven			361	1.73	1.14	
Avg	4.61		Avg			1.11	018 0.00 S -5.99			320	5.99	.70	102	1.71	.97
028	4.60	-.05	096	0.12	-.87	Meth: 060.00 PCT			361	7.11	1.62	027	1.71	.94	
131	4.51	-.29	Meth: 060.00 PCT			Free Water			320	5.99	.70	330	1.71	.93	
233	4.42	-.53	Free Water			Vacuum Oven			Avg	5.14		037	1.69	.80	
041	4.40	-.56	Vacuum Oven			361 7.11 1.62			Meth: 060.00 PCT			106	1.67	.64	
131	4.38	-.62	Avg			320 5.99 .70			Free Water			324	1.66	.50	
354	4.37	-.70	Avg			Avg 5.14			Vacuum Oven			A=Analysis beyond 3-s limits			
* X=Excluded from lab performance			S/s=Screened Outlier			R=Duplicate Range too large			A=Analysis beyond 3-s limits						

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 101.30 PCT			Meth: 101.XX PCT			Meth: 121.30 PCT			Meth: 121.XX PCT			Meth: 151.XX PPM		
<u>Acid Soluble Calcium</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>			<u>Arsenic</u>		
ICP			351	1.74	1.25	ICP			009	0.45	-.48	390	25.60 s	6.33
009	1.66	.42	361	1.73	1.21	409	0.85 s	6.02	106	0.45	-.58	409	11.50	1.66
057	1.66	.37	137	1.72	1.03	422	0.66	2.82	065	0.43	-.77	065	8.70	.91
390	1.65	.28	102	1.71	1.02	320	0.58	1.59	420	0.38	-1.63	Avg	5.32	
247	1.64	.21	027	1.71	.99	102	0.51	.27				040	3.84	-.40
023	1.63	.11	330	1.71	.99	035	0.50	.12	Meth: 144.99 PCT			136	3.20	-.60
232	1.63	.07	037	1.69	.85	Avg	0.49		Sulfur			106	3.05	-.65
Avg	1.62		055	1.68	.77	330	0.48	-.23	<u>Other</u>			247	1.65	-.99
360	1.60	-.30	106	1.67	.68	390	0.48	-.23	102	1.00	1.42			
131	1.59	-.40	324	1.66	.53	361	0.48	-.26	035	0.86	.41	Meth: 165.99 PCT		
096	1.57	-.55	009	1.66	.45	057	0.47	-.35	009	0.83	.21	<u>Acid Soluble Boron</u>		
292	1.55	-.83	057	1.66	.39	131	0.47	-.40	Avg	0.80		<u>Other</u>		
065	1.52	-1.08	040	1.66	.39	232	0.46	-.51	232	0.79	-.10	409	0.042	1.28
354	1.50	-1.32	043	1.63	.34	096	0.46	-.59	422	0.79	-.14	Avg	0.018	
095	1.49	-1.40	368	1.65	.32	009	0.45	-.64	361	0.56	-1.80	422	0.009	-.48
307	1.43 R	-2.14	262	1.65	.30	106	0.45	-.75	409	0.55 R	-1.88	307	0.010 R	-.51
393	1.37	-2.64	390	1.65	.29	065	0.43	-.95	390	0.32 s	-4.06	232	0.003	-.80
			177	1.64	.23									
			247	1.64	.22	Meth: 121.99 PCT			Meth: 151.00 PPM			Meth: 181.00 PPM		
Meth: 101.70 PCT			Meth: 101.99 PCT			Meth: 121.99 PCT			Meth: 151.00 PPM			Meth: 181.00 PPM		
<u>Acid Soluble Calcium</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Arsenic</u>			<u>Cadmium</u>		
<u>Titrimetric</u>			<u>Titrimetric</u>			<u>Other</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>		
415	1.48	.71	Avg	1.62		420	0.38	.71	040	3.84	.51	136	0.95	1.17
			360	1.60	-.32				Avg	3.52		Avg	0.95	
			131	1.59	-.43	Meth: 121.XX PCT			136	3.20	-1.12	040	0.95	-.36
			095	1.60	-.50	<u>Acid Soluble Magnesi</u>			Meth: 151.30 PPM			Meth: 181.30 PPM		
			096	1.57	-.59	409			<u>Arsenic</u>			<u>Cadmium</u>		
			292	1.55	-.89	422			ICP			ICP		
			233	1.54	-.99	320			390			324		
			065	1.52	-1.15	102			065			065		
			397	1.52	-1.22	035			Avg			393		
			354	1.50	-1.41	Avg			106			037		
			029	1.52 R	-1.47	390			247			Avg		
			095	1.49	-1.50	361			Meth: 151.99 PPM			009		
			415	1.48	-1.61	330			<u>Arsenic</u>			390		
			307	1.43 R	-2.28	057			ICP			035		
			393	1.37	-2.82	131			390			2.24		
			420	0.88 s	-8.28	232			065			2.79		
						096			Avg			009		
						046			106			2.25		
						-.43			247			-.27		
						-.43			Meth: 151.99 PPM			390		
						-.43			<u>Arsenic</u>			035		
						-.43			<u>Other</u>			2.03		
						-.43			409			1.78		
						-.43			11.50			-.54		
						-.43			.71			247		
						-.43			A=Analysis beyond 3-s limits			1.70		
						-.43						-.55		

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 181.30 PPM			Meth: 190.99 PCT			Meth: 191.XX PPM			Meth: 202.XX PPM			Meth: 221.30 PCT		
<u>Cadmium</u>			<u>Water Soluble Chlori</u>			<u>Chromium</u>			<u>Acid Soluble Cobalt</u>			<u>Acid Soluble Copper</u>		
ICP			Other			037	187.25	.28	037	12.25	1.38	ICP		
102	1.27	-.76	009	0.23	.71	Avg	185.07		390	10.04 R	.81	393	0.0217	.09
096	1.25	-.77	Meth: 190.XX PCT			324	184.50	-.12	009	10.00	.65	Avg	0.0216	
232	1.15	-.83	<u>Water Soluble Chlori</u>			096	184.00	-.17	040	9.80	.60	035	0.0213	-.31
106	1.05	-.87	422	0.30	.87	035	182.50	-.28	Avg	7.92		426	0.0212	-.36
Meth: 181.99 PPM			Avg	0.27		232	176.65	-.65	320	7.00	-.29	106	0.0215	-.39
<u>Cadmium</u>			009	0.23	-.87	393	173.36	-.90	096	6.50	-.45	324	0.0211	-.48
<u>Other</u>			Meth: 191.30 PPM			065	167.00	-1.40	102	6.37	-.49	232	0.0213	-.59
409	2.35	.71	<u>Chromium</u>			233	166.85	-1.40	324	5.95	-.62	131	0.0207	-.72
Meth: 181.XX PPM			ICP			409	109.60 s	-5.80	106	5.40	-.79	095	0.0201	-1.18
<u>Cadmium</u>			102	208.96	1.87	368	47.33 s	-10.58	232	4.75	-1.00	040	0.0200	-1.24
324	7.35	2.46	390	202.00	1.30	Meth: 202.30 PPM			065	4.64	-1.03	009	0.0197	-1.51
065	5.52	1.52	009	195.75	.83	<u>Acid Soluble Cobalt</u>			Meth: 221.00 PCT			Meth: 221.99 PCT		
393	5.40	1.46	247	192.00	.54	<u>ICP</u>			<u>Acid Soluble Copper</u>			<u>Acid Soluble Copper</u>		
037	3.26	.35	037	187.25	.28	057	14.45	2.05	<u>Atomic Absorption</u>			<u>Other</u>		
Avg	2.58		Avg	185.07		037	12.25	1.38	095	0.0259	1.79	409	0.1070 S	37.61
409	2.35	-.14	324	184.50	-.12	390	10.04 R	.81	425	0.0244	1.15	420	0.0250	1.06
009	2.25	-.17	096	184.00	-.17	009	10.00	.65	Avg	0.0218		Avg	0.0238	
390	2.24	-.26	035	182.50	-.28	040	9.80	.60	428	0.0211	-.31	037	0.0225	-.61
035	2.03	-.29	232	176.65	-.65	Avg	7.92		043	0.0210	-.32	368	0.0120 S	-5.31
247	1.70	-.45	393	173.36	-.90	320	7.00	-.29	028	0.0203	-.67	Meth: 221.XX PCT		
368	1.78 R	-.45	065	167.00	-1.40	096	6.50	-.45	262	0.0200	-.75	<u>Acid Soluble Copper</u>		
102	1.27	-.68	233	166.85	-1.40	102	6.37	-.49	029	0.0197	-.88	409	0.1070 s	52.60
096	1.25	-.69	368	47.33 s	-10.58	324	5.95	-.62	Meth: 221.30 PCT			307	0.0234 s	5.00
232	1.15	-.74	Meth: 191.99 PPM			106	5.40	-.79	<u>Acid Soluble Copper</u>			096	0.0260 R	2.78
106	1.05	-.79	<u>Chromium</u>			232	4.75	-1.00	<u>ICP</u>			095	0.0259	2.58
136	0.95	-.84	<u>Other</u>			065	4.64	-1.03	307	0.0234 s	6.24	420	0.0250 R	2.35
040	0.95	-.84	409	109.60 S	.00	Meth: 202.99 PPM			096	0.0260 s	3.55	102	0.0249	1.93
Meth: 190.00 PCT			Meth: 191.XX PPM			<u>Acid Soluble Cobalt</u>			102	0.0249	2.50	425	0.0244	1.65
<u>Water Soluble Chlori</u>			<u>Chromium</u>			<u>Other</u>			390	0.0233	1.34	390	0.0233	1.01
422	0.30	.71	102	208.96	1.87	409	38.15 S	.00	422	0.0230 R	1.31	422	0.0230	.99
Meth: 190.99 PCT			390	202.00	1.30	Meth: 202.XX PPM			027	0.0230	1.06	027	0.0230	.77
<u>Water Soluble Chlori</u>			009	195.75	.83	<u>Acid Soluble Cobalt</u>			065	0.0223	.63	037	0.0225	.56
<u>Titrimetric</u>			247	192.00	.54	409	38.15 s	9.62	330	0.0219	.31	065	0.0223	.44
Meth: 190.99 PCT			057	14.45	2.05	Meth: 202.XX PPM			354	0.0220	.29	330	0.0219	.21
<u>Water Soluble Chlori</u>			Meth: 202.30 PPM			<u>Acid Soluble Cobalt</u>			057	0.0218	.21	354	0.0220	.16
<u>Titrimetric</u>			<u>Acid Soluble Cobalt</u>			<u>Other</u>			Meth: 221.00 PCT			Meth: 221.99 PCT		
422			037			037			<u>Acid Soluble Copper</u>			<u>Acid Soluble Copper</u>		
009			040			040			<u>Atomic Absorption</u>			<u>Other</u>		
232			096			096			095			409		
106			324			324			425			420		
409			065			065			Avg			Avg		
009			232			232			428			037		
009			393			393			043			368		
009			065			065			028					
009			233			233			262					
009			368			368			029					
009			065			065			Meth: 221.30 PCT					
009			233			233			<u>Acid Soluble Copper</u>					
009			368			368			<u>ICP</u>					
009			065			065			307					
009			233			233			096					
009			368			368			102					
009			065			065			390					
009			232			232			422					
009			393			393			027					
009			065			065			065					
009			232			232			330					
009			393			393			354					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232			057					
009			368			368			057					
009			065			065			057					
009			232			232			057					
009			393			393			057					
009			065			065			057					
009			232			232								

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 221.XX PCT			Meth: 241.00 PCT			Meth: 241.99 PCT			Meth: 241.XX PCT			Meth: 251.99 PPM		
<u>Acid Soluble Copper</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Lead</u>		
057	0.0218	.13	<u>Atomic Absorption</u>			<u>Other</u>			177	5.15	-.66	<u>Other</u>		
Avg	0.0217		428	4.83	-1.25	Avg	5.13		381	5.15	-.66	409	18.10 S	.00
393	0.0217	-.01	030	4.70	-1.63	065	4.96	-.94	040	5.14	-.71	Meth: 251.XX PPM		
035	0.0213	-.32	Meth: 241.30 PCT			Meth: 241.XX PCT			393	5.10	-.80	<u>Lead</u>		
106	0.0215	-.34	<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			247	5.08	-.87	324	55.40	2.26
426	0.0212	-.37	<u>ICP</u>			422			397	5.04	-.94	368	47.93	1.07
428	0.0211	-.44	422	6.27	1.84	137	6.22	1.87	065	4.96	-1.18	106	45.00	.54
324	0.0211	-.45	361	6.18	1.62	361	6.18	1.78	233	4.91 R	-1.36	040	42.29	.33
043	0.0210	-.46	035	6.14	1.53	035	6.14	1.69	428	4.83	-1.43	035	43.45	.31
232	0.0213	-.51	102	5.97	1.16	351	6.02	1.39	095	4.83	-1.44	247	43.50	.30
131	0.0207	-.65	330	5.90	1.02	102	5.97	1.31	030	4.70	-1.80	Avg	41.74	
028	0.0203	-.96	057	5.73	.59	330	5.90	1.17	157	4.51	-2.20	065	40.17	-.26
095	0.0201	-1.02	354	5.72	.55	095	5.79	.87	042	4.26 s	-2.85	037	39.10	-.44
262	0.0200	-1.07	027	5.69	.47	057	5.73	.73	Meth: 251.00 PPM			009	38.90	-.47
040	0.0200	-1.07	324	5.66	.45	354	5.72	.70	<u>Lead</u>			043	37.44	-.71
029	0.0197	-1.26	390	5.57	.28	043	5.70	.68	<u>Atomic Absorption</u>			102	36.49 R	-1.06
009	0.0197	-1.29	131	5.55	.14	027	5.69	.61	040	42.29	.83	136	35.50	-1.11
368	0.0120 s	-6.01	360	5.49	.14	324	5.66	.58	Avg	38.89		233	32.27	-1.57
Meth: 241.00 PCT			Avg	5.49		390	5.57	.39	136	35.50	-.90	409	18.10 s	-3.93
<u>Acid Soluble Iron</u>			009	5.45	-.09	055	5.49	.36	Meth: 251.30 PPM			Meth: 261.00 PCT		
<u>Atomic Absorption</u>			106	5.44	-.12	029	5.58	.36	<u>Lead</u>			<u>Acid Soluble Mangane</u>		
137	6.22	2.05	023	5.30	-.44	073	5.47	.30	<u>ICP</u>			<u>AA</u>		
351	6.02	1.58	096	5.29	-.49	131	5.55	.28	324	55.40 s	3.17	262	0.040	.00
095	5.79	1.05	232	5.27	-.52	360	5.49	.20	368	47.93	1.60	Meth: 261.30 PCT		
043	5.70	.86	320	5.26	-.57	009	5.45	.05	106	45.00	.90	<u>Acid Soluble Mangane</u>		
029	5.58	.54	292	5.19	-.71	106	5.44	.03	035	43.45	.59	<u>ICP</u>		
055	5.49	.46	426	5.16	-.77	Avg	5.43		247	43.50	.59	320	0.584 s	205.68
073	5.47	.40	393	5.10	-.92	037	5.40	-.16	Avg	40.86		102	0.050	1.72
037	5.40	.18	247	5.08	-.99	023	5.30	-.31	065	40.17	-.16	330	0.048	1.30
Avg	5.36		095	4.83	-1.54	368	5.31	-.32	037	39.10	-.39	106	0.047	.78
028	5.23	-.31	157	4.51	-2.29	096	5.29	-.36	009	38.90	-.44	027	0.047	.69
262	5.23	-.43	042	4.26 S	-2.93	232	5.27	-.40	043	37.44	-.75	035	0.047	.60
177	5.15	-.48	Meth: 241.99 PCT			320	5.26	-.45	102	36.49 R	-1.25	057	0.047	.55
381	5.15	-.48	<u>Acid Soluble Iron</u>			028	5.23	-.50	233	32.27	-1.87	Avg	0.045	
040	5.14	-.53	<u>Other</u>			262	5.23	-.57	A=X=Excluded from lab performance			131	0.045	-.08
397	5.04	-.76	368	5.31	.79	292	5.19	-.59	S/s=Screened Outlier			A=Analysis beyond 3-s limits		
233	4.91	-1.19	426	5.16	-.65	R=Duplicate Range too large								

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 261.30 PCT Acid Soluble Manganese <u>ICP</u>			Meth: 281.00 PPM Mercury <u>Atomic Absorption</u>			Meth: 289.99 PPM Molybdenum <u>Other</u>			Meth: 291.30 PPM Nickel <u>ICP</u>			Meth: 301.30 PPM Selenium <u>ICP</u>		
065	0.044	- .56	040	0.43	.71	409	11.55	- .71	065	22.74	-1.26	232	11.30	1.47
009	0.044	- .59							390	21.00	-1.71	065	5.48	.13
096	0.044	- .61	Meth: 281.99 PPM Mercury <u>Other</u>			Meth: 289.99 PPM Molybdenum <u>Other</u>			Meth: 291.99 PPM Nickel <u>Other</u>			Avg 4.92		
390	0.043	- .82	409	0.18	.00	232	16.45	1.37	Meth: 301.30 PPM Selenium <u>ICP</u>			096 2.35 - .59		
232	0.041	-1.43				390	15.65	1.09	Meth: 291.99 PPM Nickel <u>Other</u>			409 0.55 - .99		
422	0.042	-1.52	Meth: 281.99 PPM Mercury <u>Other</u>			324 15.65 1.07			409	67.10 S	42.41	Meth: 301.30 PPM Selenium <u>ICP</u>		
Meth: 261.50 PCT Acid Soluble Manganese <u>Spectrometric</u>			Meth: 281.99 PPM Mercury <u>Other</u>			247 15.50 .88			035	28.75	.71	232 11.30 1.73		
420	0.044	.71	040	0.43	.92	037	14.65	.59	Meth: 291.99 PPM Nickel <u>ICP</u>			065 5.48 .26		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Avg 0.30			035 14.80 .53			Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 4.44		
409	0.216 S	.00	409	0.18	- .81	106	14.00	.12	Meth: 291.99 PPM Nickel <u>ICP</u>			040 2.53 - .49		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.00 PPM Molybdenum <u>Atomic Absorption</u>			Avg 13.77			409	67.10 S	10.26	096 2.35 - .52		
409	0.216 S	.00	040	3.05 S	.00	065	13.56	- .13	Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.55 - .97		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.00 PPM Molybdenum <u>Atomic Absorption</u>			096 12.50 - .69			Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.30 PCT Sodium <u>Flame Photometric</u>		
409	0.216 S	.00	040	3.05 S	.00	233	12.48	- .84	Meth: 291.99 PPM Nickel <u>ICP</u>			320 4.84 S .00		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			409 11.15 -1.35			Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.30 PCT Sodium <u>Flame Photometric</u>		
409	0.216 S	.00	232	16.45	1.32	368	11.03	-1.51	Meth: 291.99 PPM Nickel <u>ICP</u>			320 4.84 S .00		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.99 PCT Sodium <u>Other</u>		
409	0.216 S	.00	232	16.45	1.32	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			390 0.39 R 6.08		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			422 0.24 2.09		
409	0.216 S	.00	390	15.65	1.04	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 0.15		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			102 0.15 - .07		
409	0.216 S	.00	324	15.65	1.02	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			035 0.13 - .38		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.13 - .47		
409	0.216 S	.00	247	15.50	.81	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			232 0.13 - .56		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			009 0.12 - .67		
409	0.216 S	.00	232	16.45	1.32	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.99 PCT Sodium <u>Other</u>		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			390 0.39 R 6.08		
409	0.216 S	.00	390	15.65	1.04	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			422 0.24 2.09		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 0.15		
409	0.216 S	.00	247	15.50	.81	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			102 0.15 - .07		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			035 0.13 - .38		
409	0.216 S	.00	037	14.65	.54	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.13 - .47		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			232 0.13 - .56		
409	0.216 S	.00	035	14.80	.46	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			009 0.12 - .67		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.99 PCT Sodium <u>Other</u>		
409	0.216 S	.00	106	14.00	.03	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			390 0.39 R 6.08		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			422 0.24 2.09		
409	0.216 S	.00	Avg	13.95		040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 0.15		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			102 0.15 - .07		
409	0.216 S	.00	065	13.56	- .22	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			035 0.13 - .38		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.13 - .47		
409	0.216 S	.00	096	12.50	- .80	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			232 0.13 - .56		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			009 0.12 - .67		
409	0.216 S	.00	233	12.48	- .94	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.99 PCT Sodium <u>Other</u>		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			390 0.39 R 6.08		
409	0.216 S	.00	009	11.15	-1.48	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			422 0.24 2.09		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 0.15		
409	0.216 S	.00	368	11.03	-1.65	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			102 0.15 - .07		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			035 0.13 - .38		
409	0.216 S	.00	102	9.86 S	-3.49	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.13 - .47		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			232 0.13 - .56		
409	0.216 S	.00	247	15.50	.81	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			009 0.12 - .67		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.99 PCT Sodium <u>Other</u>		
409	0.216 S	.00	232	16.45	1.32	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			390 0.39 R 6.08		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			422 0.24 2.09		
409	0.216 S	.00	390	15.65	1.04	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 0.15		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			102 0.15 - .07		
409	0.216 S	.00	247	15.50	.81	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			035 0.13 - .38		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.13 - .47		
409	0.216 S	.00	037	14.65	.54	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			232 0.13 - .56		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			009 0.12 - .67		
409	0.216 S	.00	035	14.80	.46	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.99 PCT Sodium <u>Other</u>		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			390 0.39 R 6.08		
409	0.216 S	.00	106	14.00	.03	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			422 0.24 2.09		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 0.15		
409	0.216 S	.00	Avg	13.95		040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			102 0.15 - .07		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			035 0.13 - .38		
409	0.216 S	.00	065	13.56	- .22	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.13 - .47		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			232 0.13 - .56		
409	0.216 S	.00	096	12.50	- .80	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			009 0.12 - .67		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			Meth: 311.99 PCT Sodium <u>Other</u>		
409	0.216 S	.00	233	12.48	- .94	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			390 0.39 R 6.08		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			422 0.24 2.09		
409	0.216 S	.00	009	11.15	-1.48	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			Avg 0.15		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			102 0.15 - .07		
409	0.216 S	.00	368	11.03	-1.65	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			035 0.13 - .38		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>			102 9.86 S -3.34			Meth: 291.99 PPM Nickel <u>ICP</u>			409 0.13 - .47		
409	0.216 S	.00	102	9.86 S	-3.49	040	3.05 S	-5.44	Meth: 291.99 PPM Nickel <u>ICP</u>			232 0.13 - .56		
Meth: 261.99 PCT Acid Soluble Manganese <u>Other</u>			Meth: 289.30 PPM Molybdenum <u>ICP</u>											

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 311.XX PCT			Meth: 321.30 PCT			Meth: 321.XX PCT								
<u>Sodium</u>			Acid Soluble Zinc			<u>Acid Soluble Zinc</u>								
Avg	0.15		<u>ICP</u>			035	0.040	.31						
102	0.15	-.07	390	0.039	.12	262	0.040	.26						
035	0.13	-.38	Avg	0.039		040	0.040	.26						
409	0.13	-.47	106	0.039	-.19	057	0.040	.19						
232	0.13	-.56	027	0.038	-.25	Avg	0.039							
009	0.12	-.67	065	0.038	-.42	390	0.039	-.11						
			095	0.036	-.84	106	0.039	-.32						
			232	0.036	-.90	028	0.038	-.32						
Meth: 321.00 PCT			009			027			065			027		
Acid Soluble Zinc			0393			065			428			095		
<u>Atomic Absorption</u>			0422			095			232			009		
043	0.058 S	3.62	131			232			009			393		
095	0.043	.98	Meth: 321.99 PCT			009			393			422		
029	0.041	.55	Acid Soluble Zinc			422			425			131		
262	0.040	.39	<u>Other</u>			425			131					
028	0.038	.11	409			425			131					
Avg	0.038		368			131								
428	0.038	-.35	Avg											
425	0.027	-1.99	420											
			Meth: 321.20 PCT			Meth: 321.XX PCT								
			Acid Soluble Zinc			Acid Soluble Zinc								
			<u>Zincon Ion Exchange</u>			409								
			096			043								
			Meth: 321.30 PCT			037								
			Acid Soluble Zinc			307								
			<u>ICP</u>			426								
			037			320								
			307			330								
			426			095								
			320			102								
			330			096								
			102			368								
			354			029								
			324			420								
			035			354								
			040			029								
			057			324								
			* X=Excluded from lab performance			S/s=Screened Outlier			R=Duplicate Range too large			A=Analysis beyond 3-s limits		

Method Evaluation - Z Values Based on 1 Reports

Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs	Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs
001.99	2	0.00	1.22	0.04	144.XX	8	- 0.68	1.61	0.68
001.XX	2	0.00	1.22	0.04	151.00	2	0.00	0.65	0.73
003.10	2	0.00	1.03	0.47	151.30	4	1.56	3.25	1.79
003.XX	3	0.00	0.94	0.49	151.XX	7	0.78	2.26	1.23
010.11	4	0.00	1.06	0.18	165.99	4	- 0.101	0.935	0.156
010.12	3	- 1.25	2.33	0.06	165.XX	4	- 0.101	0.935	0.156
010.60	51	0.25	1.55	0.39	181.00	2	0.00	0.08	0.86
010.99	5	- 10.17	26.77	1.22	181.30	13	0.00	1.02	0.09
010.XX	62	- 0.55	5.49	0.35	181.XX	16	- 0.03	0.99	0.08
020.10	5	0.00	1.04	0.18	190.XX	2	0.00	1.22	0.04
020.20	13	- 0.10	1.04	0.09	191.30	13	- 0.81	3.09	0.15
020.40	6	- 0.02	0.94	0.53	191.XX	14	- 1.17	3.25	0.15
020.50	4	0.00	1.07	0.10	202.30	12	0.06	0.99	0.15
020.XX	29	- 0.30	1.86	0.18	202.XX	13	0.78	2.79	0.43
030.10	2	0.00	1.22	0.06	221.00	7	0.0000	1.0243	0.1709
030.XX	5	0.05	0.94	0.16	221.30	20	0.2869	1.2116	1.4172
040.10	2	0.00	1.19	0.21	221.99	4	8.0595	19.820	1.2219
040.XX	4	0.00	1.08	0.09	221.XX	30	1.7117	9.7095	1.1614
041.10	15	0.59	4.01	0.50	241.00	17	0.00	0.99	0.23
041.20	3	0.00	1.12	0.05	241.30	25	- 0.12	1.14	0.16
041.40	6	- 3.50	5.49	0.12	241.99	2	0.00	1.05	0.44
041.50	9	- 1.22	3.77	0.22	241.XX	43	- 0.09	1.05	0.27
041.60	9	- 0.79	2.57	0.11	251.00	2	0.00	1.02	0.48
041.XX	35	- 0.66	2.15	0.34	251.30	11	0.20	1.37	0.29
048.XX	2	0.00	1.22	0.01	251.XX	14	- 0.34	1.40	0.26
050.50	6	0.00	1.04	0.13	261.30	14	14.689	54.968	1.125
050.51	5	0.00	0.98	0.36	261.XX	17	14.970	48.293	2.132
050.61	2	- 2.99	4.23	0.50	281.XX	2	0.000	1.147	0.304
050.99	5	0.00	1.06	0.07	289.30	13	- 0.16	1.09	0.84
050.XX	20	- 0.24	1.74	0.25	289.XX	15	- 0.49	1.70	0.77
060.00	6	0.00	1.05	0.03	291.30	14	0.00	1.00	0.21
060.XX	6	0.00	1.05	0.03	291.99	2	20.86	29.50	5.41
101.00	13	0.37	1.60	0.48	291.XX	16	0.63	2.70	0.50
101.30	26	0.54	2.08	0.46	301.30	4	0.00	1.07	0.10
101.99	2	- 27.22	38.50	1.12	301.XX	5	0.00	1.05	0.11
101.XX	41	0.29	2.39	0.47	311.99	7	0.85	2.45	0.44
121.30	15	0.40	1.82	0.25	311.XX	8	15.00	40.08	1.31
121.XX	16	0.35	1.72	0.23	321.00	7	0.514	1.649	0.259
144.99	8	- 0.68	1.61	0.68	321.30	21	0.171	1.799	1.004

Method Evaluation - Z Values Based on 1 Reports

Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs	Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs
321.99	3	51.503	89.208	1.181					
321.XX	30	3.279	17.019	0.984					