

AMW-2

Collected date/time: 09/13/23 09:00

SAMPLE RESULTS - 04

L1655739

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	15.3		1	09/20/2023 13:49	WG2132924

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1890		2.50	1	09/19/2023 23:31	WG2132924

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	7060		100	1	09/17/2023 21:52	WG2133245

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	760		20.0	1	09/18/2023 15:10	WG2134419
Alkalinity,Bicarbonate	760		20.0	1	09/18/2023 15:10	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 15:10	WG2134419
Alkalinity,Hydroxide	ND		20.0	1	09/18/2023 15:10	WG2134419

Sample Narrative:

L1655739-04 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	391		10.0	10	09/16/2023 19:26	WG2133591
Fluoride	ND		1.50	10	09/16/2023 19:26	WG2133591
Sulfate	3820		500	100	09/16/2023 19:40	WG2133591

Sample Narrative:

L1655739-04 WG2133591: Dilution due to matrix.

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	09/20/2023 12:49	WG2132888
Arsenic,Dissolved	ND		0.0100	1	09/20/2023 12:49	WG2132888
Barium,Dissolved	0.0190		0.00500	1	09/20/2023 12:49	WG2132888
Boron,Dissolved	0.229		0.200	1	09/20/2023 12:49	WG2132888
Cadmium,Dissolved	ND		0.00200	1	09/20/2023 12:49	WG2132888
Calcium	467		1.00	1	09/19/2023 23:31	WG2132924
Calcium,Dissolved	462		1.00	1	09/20/2023 12:49	WG2132888
Iron,Dissolved	ND		0.100	1	09/20/2023 12:49	WG2132888
Lead,Dissolved	ND		0.00600	1	09/20/2023 12:49	WG2132888
Magnesium	176		1.00	1	09/19/2023 23:31	WG2132924
Magnesium,Dissolved	178		1.00	1	09/20/2023 12:49	WG2132888
Manganese,Dissolved	3.50		0.0100	1	09/20/2023 12:49	WG2132888
Molybdenum,Dissolved	ND		0.00500	1	09/20/2023 12:49	WG2132888
Potassium,Dissolved	30.1		2.00	1	09/20/2023 12:49	WG2132888
Selenium,Dissolved	ND		0.0100	1	09/20/2023 12:49	WG2132888
Sodium	1520		15.0	5	09/20/2023 13:49	WG2132924
Sodium,Dissolved	1500		15.0	5	09/22/2023 12:26	WG2132888

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SAMPLE RESULTS - 05

L1655739

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.97		1	09/19/2023 23:34	WG2132924

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	953		2.50	1	09/19/2023 23:34	WG2132924

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1610		25.0	1	09/17/2023 21:52	WG2133245

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	199		20.0	1	09/18/2023 15:23	WG2134419
Alkalinity,Bicarbonate	199		20.0	1	09/18/2023 15:23	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 15:23	WG2134419
Alkalinity,Hydroxide	ND		20.0	1	09/18/2023 15:23	WG2134419

Sample Narrative:

L1655739-05 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	32.9		1.00	1	09/16/2023 19:53	WG2133591
Fluoride	0.955		0.150	1	09/16/2023 19:53	WG2133591
Sulfate	897		50.0	10	09/16/2023 20:07	WG2133591

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	09/20/2023 12:52	WG2132888
Arsenic,Dissolved	ND		0.0100	1	09/20/2023 12:52	WG2132888
Barium,Dissolved	0.0273		0.00500	1	09/20/2023 12:52	WG2132888
Boron,Dissolved	ND		0.200	1	09/20/2023 12:52	WG2132888
Cadmium,Dissolved	ND		0.00200	1	09/20/2023 12:52	WG2132888
Calcium	262		1.00	1	09/19/2023 23:34	WG2132924
Calcium,Dissolved	252		1.00	1	09/20/2023 12:52	WG2132888
Iron,Dissolved	ND		0.100	1	09/20/2023 12:52	WG2132888
Lead,Dissolved	ND		0.00600	1	09/20/2023 12:52	WG2132888
Magnesium	72.4		1.00	1	09/19/2023 23:34	WG2132924
Magnesium,Dissolved	71.8		1.00	1	09/20/2023 12:52	WG2132888
Manganese,Dissolved	ND		0.0100	1	09/20/2023 12:52	WG2132888
Molybdenum,Dissolved	ND		0.00500	1	09/20/2023 12:52	WG2132888
Potassium,Dissolved	3.63		2.00	1	09/20/2023 12:52	WG2132888
Selenium,Dissolved	ND		0.0100	1	09/20/2023 12:52	WG2132888
Sodium	140		3.00	1	09/19/2023 23:34	WG2132924
Sodium,Dissolved	141		3.00	1	09/20/2023 12:52	WG2132888

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SAMPLE RESULTS - 06

L1655739

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.36		1	09/19/2023 23:37	WG2132924

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	670		2.50	1	09/19/2023 23:37	WG2132924

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1100		20.0	1	09/17/2023 21:52	WG2133245

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	236		20.0	1	09/18/2023 15:28	WG2134419
Alkalinity,Bicarbonate	236		20.0	1	09/18/2023 15:28	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 15:28	WG2134419
Alkalinity,Hydroxide	ND		20.0	1	09/18/2023 15:28	WG2134419

Sample Narrative:

L1655739-06 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	77.1		1.00	1	09/16/2023 20:48	WG2133591
Sulfate	246		25.0	5	09/16/2023 21:01	WG2133591

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	09/20/2023 12:55	WG2132888
Barium,Dissolved	0.0876		0.00500	1	09/20/2023 12:55	WG2132888
Cadmium,Dissolved	ND		0.00200	1	09/20/2023 12:55	WG2132888
Calcium	183		1.00	1	09/19/2023 23:37	WG2132924
Calcium,Dissolved	178		1.00	1	09/20/2023 12:55	WG2132888
Iron,Dissolved	ND		0.100	1	09/20/2023 12:55	WG2132888
Lead,Dissolved	ND		0.00600	1	09/20/2023 12:55	WG2132888
Magnesium	51.7		1.00	1	09/19/2023 23:37	WG2132924
Magnesium,Dissolved	50.6		1.00	1	09/20/2023 12:55	WG2132888
Manganese,Dissolved	ND		0.0100	1	09/20/2023 12:55	WG2132888
Molybdenum,Dissolved	ND		0.00500	1	09/20/2023 12:55	WG2132888
Selenium,Dissolved	ND		0.0100	1	09/20/2023 12:55	WG2132888
Sodium	80.8		3.00	1	09/19/2023 23:37	WG2132924
Sodium,Dissolved	80.9		3.00	1	09/20/2023 12:55	WG2132888

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SAMPLE RESULTS - 07

L1655739

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	21.7		1	09/20/2023 12:40	WG2134579

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2480		12.5	1	09/20/2023 12:40	WG2134579

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	7600		200	1	09/18/2023 17:16	WG2134259

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	895		20.0	1	09/18/2023 15:33	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 15:33	WG2134419

Sample Narrative:

L1655739-07 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	943		20.0	20	09/16/2023 21:15	WG2133591
Fluoride	ND		3.00	20	09/16/2023 21:15	WG2133591
Sulfate	5800		500	100	09/16/2023 21:28	WG2133591

Sample Narrative:

L1655739-07 WG2133591: Dilution due to matrix.

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	09/21/2023 10:06	WG2134562
Arsenic,Dissolved	ND		0.0100	1	09/21/2023 10:06	WG2134562
Barium,Dissolved	0.0123		0.00500	1	09/21/2023 10:06	WG2134562
Boron,Dissolved	0.287		0.200	1	09/21/2023 10:06	WG2134562
Cadmium,Dissolved	ND		0.00200	1	09/21/2023 10:06	WG2134562
Calcium	443		5.00	5	09/20/2023 12:40	WG2134579
Calcium,Dissolved	446		1.00	1	09/21/2023 10:06	WG2134562
Iron,Dissolved	ND		0.100	1	09/21/2023 10:06	WG2134562
Lead,Dissolved	ND		0.00600	1	09/21/2023 10:06	WG2134562
Magnesium	334		5.00	5	09/20/2023 12:40	WG2134579
Magnesium,Dissolved	342		1.00	1	09/21/2023 10:06	WG2134562
Manganese,Dissolved	2.13		0.0100	1	09/21/2023 10:06	WG2134562
Molybdenum,Dissolved	0.00580		0.00500	1	09/21/2023 10:06	WG2134562
Potassium,Dissolved	21.5		2.00	1	09/21/2023 10:06	WG2134562
Selenium,Dissolved	ND		0.0100	1	09/21/2023 10:06	WG2134562
Sodium	2480		15.0	5	09/20/2023 12:40	WG2134579
Sodium,Dissolved	2390		15.0	5	09/22/2023 01:43	WG2134562

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SAMPLE RESULTS - 08

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Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.36		1	09/22/2023 11:48	WG2134579

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2050		12.5	1	09/22/2023 11:48	WG2134579

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	2890		50.0	1	09/18/2023 17:16	WG2134259

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	575		20.0	1	09/18/2023 15:37	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 15:37	WG2134419

Sample Narrative:

L1655739-08 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	135		10.0	10	09/16/2023 17:40	WG2133641
Fluoride	ND		1.50	10	09/16/2023 17:40	WG2133641
Sulfate	1890		50.0	10	09/16/2023 17:40	WG2133641

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	09/21/2023 10:09	WG2134562
Arsenic,Dissolved	0.0129		0.0100	1	09/21/2023 10:09	WG2134562
Barium,Dissolved	0.0360		0.00500	1	09/21/2023 10:09	WG2134562
Boron,Dissolved	ND		0.200	1	09/21/2023 10:09	WG2134562
Cadmium,Dissolved	ND		0.00200	1	09/21/2023 10:09	WG2134562
Calcium	579		5.00	5	09/22/2023 11:48	WG2134579
Calcium,Dissolved	585		1.00	1	09/21/2023 10:09	WG2134562
Iron,Dissolved	ND		0.100	1	09/21/2023 10:09	WG2134562
Lead,Dissolved	ND		0.00600	1	09/21/2023 10:09	WG2134562
Magnesium	146		5.00	5	09/22/2023 11:48	WG2134579
Magnesium,Dissolved	154		1.00	1	09/21/2023 10:09	WG2134562
Manganese,Dissolved	18.5		0.0100	1	09/21/2023 10:09	WG2134562
Molybdenum,Dissolved	0.00582		0.00500	1	09/21/2023 10:09	WG2134562
Potassium,Dissolved	18.7		2.00	1	09/21/2023 10:09	WG2134562
Selenium,Dissolved	ND		0.0100	1	09/21/2023 10:09	WG2134562
Sodium	246		15.0	5	09/22/2023 11:48	WG2134579
Sodium,Dissolved	269		3.00	1	09/21/2023 10:09	WG2134562

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SAMPLE RESULTS - 09

L1655739

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	16.0		1	09/20/2023 12:43	WG2134579

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1880		12.5	1	09/20/2023 12:43	WG2134579

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	4460		100	1	09/18/2023 17:16	WG2134259

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	981		20.0	1	09/18/2023 15:40	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 15:40	WG2134419

Sample Narrative:

L1655739-09 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	795		10.0	10	09/16/2023 18:06	WG2133641
Fluoride	ND		1.50	10	09/16/2023 18:06	WG2133641
Sulfate	3000		500	100	09/16/2023 18:44	WG2133641

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	09/21/2023 10:12	WG2134562
Arsenic,Dissolved	ND		0.0100	1	09/21/2023 10:12	WG2134562
Barium,Dissolved	0.0109		0.00500	1	09/21/2023 10:12	WG2134562
Boron,Dissolved	0.339		0.200	1	09/21/2023 10:12	WG2134562
Cadmium,Dissolved	ND		0.00200	1	09/21/2023 10:12	WG2134562
Calcium	478		5.00	5	09/20/2023 12:43	WG2134579
Calcium,Dissolved	468		1.00	1	09/21/2023 10:12	WG2134562
Iron,Dissolved	ND		0.100	1	09/21/2023 10:12	WG2134562
Lead,Dissolved	ND		0.00600	1	09/21/2023 10:12	WG2134562
Magnesium	167		5.00	5	09/20/2023 12:43	WG2134579
Magnesium,Dissolved	166		1.00	1	09/21/2023 10:12	WG2134562
Manganese,Dissolved	0.482		0.0100	1	09/21/2023 10:12	WG2134562
Molybdenum,Dissolved	0.00521		0.00500	1	09/21/2023 10:12	WG2134562
Potassium,Dissolved	16.6		2.00	1	09/21/2023 10:12	WG2134562
Selenium,Dissolved	ND		0.0100	1	09/21/2023 10:12	WG2134562
Sodium	1600		15.0	5	09/20/2023 12:43	WG2134579
Sodium,Dissolved	1820		15.0	5	09/22/2023 01:46	WG2134562

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SAMPLE RESULTS - 10

L1655739

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.31		1	09/19/2023 18:34	WG2134579

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	484		2.50	1	09/19/2023 18:34	WG2134579

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1290		20.0	1	09/18/2023 17:16	WG2134259

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	293		20.0	1	09/18/2023 16:27	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 16:27	WG2134419

Sample Narrative:

L1655739-10 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	34.3		1.00	1	09/16/2023 18:57	WG2133641
Fluoride	2.25		0.150	1	09/16/2023 18:57	WG2133641
Sulfate	681		50.0	10	09/16/2023 19:09	WG2133641

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	09/21/2023 10:15	WG2134562
Arsenic,Dissolved	ND		0.0100	1	09/21/2023 10:15	WG2134562
Barium,Dissolved	0.00981		0.00500	1	09/21/2023 10:15	WG2134562
Boron,Dissolved	0.461		0.200	1	09/21/2023 10:15	WG2134562
Cadmium,Dissolved	ND		0.00200	1	09/21/2023 10:15	WG2134562
Calcium	111		1.00	1	09/19/2023 18:34	WG2134579
Calcium,Dissolved	109		1.00	1	09/21/2023 10:15	WG2134562
Iron,Dissolved	ND		0.100	1	09/21/2023 10:15	WG2134562
Lead,Dissolved	ND		0.00600	1	09/21/2023 10:15	WG2134562
Magnesium	50.3		1.00	1	09/19/2023 18:34	WG2134579
Magnesium,Dissolved	48.6		1.00	1	09/21/2023 10:15	WG2134562
Manganese,Dissolved	0.521		0.0100	1	09/21/2023 10:15	WG2134562
Molybdenum,Dissolved	0.00765		0.00500	1	09/21/2023 10:15	WG2134562
Potassium,Dissolved	5.48		2.00	1	09/21/2023 10:15	WG2134562
Selenium,Dissolved	ND		0.0100	1	09/21/2023 10:15	WG2134562
Sodium	269		3.00	1	09/19/2023 18:34	WG2134579
Sodium,Dissolved	264		3.00	1	09/21/2023 10:15	WG2134562

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L1655739

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.82		1	09/19/2023 18:37	WG2134579

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	679		2.50	1	09/19/2023 18:37	WG2134579

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1650		20.0	1	09/18/2023 17:16	WG2134259

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	287		20.0	1	09/18/2023 15:53	WG2134419
Alkalinity,Carbonate	ND		20.0	1	09/18/2023 15:53	WG2134419

Sample Narrative:

L1655739-11 WG2134419: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	129		1.00	1	09/16/2023 19:22	WG2133641
Fluoride	1.12		0.150	1	09/16/2023 19:22	WG2133641
Sulfate	884		50.0	10	09/16/2023 19:35	WG2133641

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	09/21/2023 10:24	WG2134562
Arsenic,Dissolved	ND		0.0100	1	09/21/2023 10:24	WG2134562
Barium,Dissolved	0.0218		0.00500	1	09/21/2023 10:24	WG2134562
Boron,Dissolved	0.249		0.200	1	09/21/2023 10:24	WG2134562
Cadmium,Dissolved	ND		0.00200	1	09/21/2023 10:24	WG2134562
Calcium	176		1.00	1	09/19/2023 18:37	WG2134579
Calcium,Dissolved	197		1.00	1	09/21/2023 10:24	WG2134562
Iron,Dissolved	ND		0.100	1	09/21/2023 10:24	WG2134562
Lead,Dissolved	ND		0.00600	1	09/21/2023 10:24	WG2134562
Magnesium	58.2		1.00	1	09/19/2023 18:37	WG2134579
Magnesium,Dissolved	62.0		1.00	1	09/21/2023 10:24	WG2134562
Manganese,Dissolved	0.526		0.0100	1	09/21/2023 10:24	WG2134562
Molybdenum,Dissolved	0.00980		0.00500	1	09/21/2023 10:24	WG2134562
Potassium,Dissolved	3.26		2.00	1	09/21/2023 10:24	WG2134562
Selenium,Dissolved	ND		0.0100	1	09/21/2023 10:24	WG2134562
Sodium	288		3.00	1	09/19/2023 18:37	WG2134579
Sodium,Dissolved	312		3.00	1	09/21/2023 10:24	WG2134562

WG2133245

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

L1655739-01.02.03.04.05.06

Method Blank (MB)

(MB) R3975592-1 09/17/23 21:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1655684-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1655684-01 09/17/23 21:52 • (DUP) R3975592-3 09/17/23 21:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	352	354	1	0.567		5

L1655688-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1655688-02 09/17/23 21:52 • (DUP) R3975592-4 09/17/23 21:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	54.0	51.0	1	5.71	J3	5

Laboratory Control Sample (LCS)

(LCS) R3975592-2 09/17/23 21:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8400	95.5	77.3-123	

WG2134259

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

L1655739-07,08,09,10,11

Method Blank (MB)

(MB) R3975842-1 09/18/23 17:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

Laboratory Control Sample (LCS)

(LCS) R3975842-2 09/18/23 17:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8520	96.8	77.3-123	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2134417

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1655739-01,02

Method Blank (MB)

(MB) R3974937-2 09/19/23 09:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity,Bicarbonate	U	8.45	8.45	20.0
Alkalinity,Carbonate	U	8.45	8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1655739-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1655739-02 09/19/23 10:25 • (DUP) R3974937-3 09/19/23 10:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	307	306	1	0.637		20
Alkalinity,Carbonate	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1655739-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1655739-01 09/19/23 12:08 • (DUP) R3974937-4 09/19/23 12:13

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	285	285	1	0.00699		20
Alkalinity,Carbonate	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

WG2134419

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1655739-03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R3974651-2 09/18/23 14:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U	8.45	8.45	20.0
Alkalinity,Bicarbonate	U	8.45	8.45	20.0
Alkalinity,Carbonate	U	8.45	8.45	20.0
Alkalinity,Hydroxide	U	8.45	8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1655739-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1655739-04 09/18/23 15:10 • (DUP) R3974651-3 09/18/23 15:14

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	760	766	1	0.763		20
Alkalinity,Bicarbonate	760	766	1	0.763		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1655739-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1655739-10 09/18/23 16:27 • (DUP) R3974651-4 09/18/23 16:32

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	293	295	1	0.625		20
Alkalinity,Bicarbonate	293	295	1	0.625		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

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WG2134419

Wet Chemistry by Method 2320 B-2011

Laboratory Control Sample (LCS)

(LCS) R3974651-1 09/18/23 14:43

QUALITY CONTROL SUMMARY

L1655739-03,04,05,06,07,08,09,10,11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	99.9	99.9	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3974915-1 09/16/23 10:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U	0.379	1.00	
Fluoride	U	0.0640	0.150	
Sulfate	0.616	0.594	5.00	

L1655246-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1655246-08 09/16/23 13:22 • (DUP) R3974915-3 09/16/23 13:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	365	367	1	0.604	E	15
Fluoride	0.350	0.354	1	0.966		15
Sulfate	ND	ND	1	3.67		15

L1655607-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1655607-01 09/16/23 21:42 • (DUP) R3974915-6 09/16/23 21:56

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	4.00	3.95	1	1.12		15
Fluoride	ND	ND	1	1.38		15
Sulfate	8.02	7.93	1	1.07		15

Laboratory Control Sample (LCS)

(LCS) R3974915-2 09/16/23 10:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.2	100	80.0-120	
Fluoride	8.00	8.43	105	80.0-120	
Sulfate	40.0	39.6	98.9	80.0-120	

WG2133591

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1655739-01,02,03,04,05,06,07

L1655246-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1655246-08 09/16/23 13:22 • (MS) R3974915-4 09/16/23 13:48 • (MSD) R3974915-5 09/16/23 14:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	365	336	336	0.000	0.000	1	80.0-120	EV	EV	0.223	15
Fluoride	8.00	0.350	9.11	9.06	109	109	1	80.0-120			0.550	15
Sulfate	40.0	ND	40.6	40.4	100	99.4	1	80.0-120			0.645	15

L1655607-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1655607-01 09/16/23 21:42 • (MS) R3974915-7 09/16/23 22:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	4.00	45.2	103	1	80.0-120	
Fluoride	8.00	ND	8.72	108	1	80.0-120	
Sulfate	40.0	8.02	47.1	97.7	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2133641

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1655739-08,09,10,11

Method Blank (MB)

(MB) R3975060-1 09/16/23 12:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U	0.379	1.00	
Fluoride	U	0.0640	0.150	
Sulfate	U	0.594	5.00	

L1655759-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1655759-01 09/16/23 16:49 • (DUP) R3975060-3 09/16/23 17:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	38.9	38.8	1	0.239		15
Fluoride	0.224	0.225	1	0.802		15
Sulfate	56.7	56.5	1	0.370		15

L1655773-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1655773-04 09/17/23 01:19 • (DUP) R3975060-6 09/17/23 01:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	8.28	8.38	1	1.23		15
Fluoride	0.322	0.325	1	0.804		15
Sulfate	7.15	7.24	1	1.32		15

Laboratory Control Sample (LCS)

(LCS) R3975060-2 09/16/23 12:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.8	97.0	80.0-120	
Fluoride	8.00	7.89	98.6	80.0-120	
Sulfate	40.0	38.4	96.1	80.0-120	

WG2133641

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1655739-08,09,10,11

L1655759-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1655759-01 09/16/23 16:49 • (MS) R3975060-4 09/16/23 17:15 • (MSD) R3975060-5 09/16/23 17:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	38.9	71.4	71.3	81.1	80.9	1	80.0-120			0.110	15
Fluoride	8.00	0.224	7.99	7.98	97.1	97.0	1	80.0-120			0.103	15
Sulfate	40.0	56.7	84.5	84.3	69.6	69.1	1	80.0-120	J6	J6	0.237	15

L1655773-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1655773-04 09/17/23 01:19 • (MS) R3975060-7 09/17/23 01:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	8.28	46.3	95.2	1	80.0-120	
Fluoride	8.00	0.322	8.31	99.9	1	80.0-120	
Sulfate	40.0	7.15	44.5	93.5	1	80.0-120	

¹ Cp ² Tc ³ Ss ⁴ Cn ⁵ Sr ⁶ Qc ⁷ Gl ⁸ Al ⁹ Sc

WG2132888

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1655739-01.02.03.04.05.06

Method Blank (MB)

(MB) R3975404-1 09/20/23 12:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony, Dissolved	0.00468	J	0.00430	0.0100
Arsenic, Dissolved	U		0.00440	0.0100
Barium, Dissolved	U		0.000736	0.00500
Boron, Dissolved	U		0.0200	0.200
Cadmium, Dissolved	U		0.000479	0.00200
Calcium, Dissolved	U		0.0793	1.00
Iron, Dissolved	0.267		0.0180	0.100
Lead, Dissolved	U		0.00299	0.00600
Magnesium, Dissolved	U		0.0853	1.00
Manganese, Dissolved	0.00409	J	0.000934	0.0100
Molybdenum, Dissolved	0.00153	J	0.00116	0.00500
Potassium, Dissolved	U		0.261	2.00
Selenium, Dissolved	U		0.00735	0.0100
Sodium, Dissolved	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R3975404-2 09/20/23 12:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %
Antimony, Dissolved	1.00	0.970	97.0	80.0-120
Arsenic, Dissolved	1.00	1.01	101	80.0-120
Barium, Dissolved	1.00	1.03	103	80.0-120
Boron, Dissolved	1.00	0.948	94.8	80.0-120
Cadmium, Dissolved	1.00	0.988	98.8	80.0-120
Calcium, Dissolved	10.0	9.81	98.1	80.0-120
Iron, Dissolved	10.0	9.95	99.5	80.0-120
Lead, Dissolved	1.00	0.920	92.0	80.0-120
Magnesium, Dissolved	10.0	9.73	97.3	80.0-120
Manganese, Dissolved	1.00	0.982	98.2	80.0-120
Molybdenum, Dissolved	1.00	0.996	99.6	80.0-120
Potassium, Dissolved	10.0	9.49	94.9	80.0-120
Selenium, Dissolved	1.00	0.985	98.5	80.0-120
Sodium, Dissolved	10.0	10.8	108	80.0-120

ACCOUNT:

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WG2132888

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1655739-01.02.03.04.05.06

L1655695-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1655695-01 09/20/23 12:08 • (MS) R3975404-4 09/20/23 12:13 • (MSD) R3975404-5 09/20/23 12:16

Analyte	Spike Amount mg/l	Original Result	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony, Dissolved	1.00		0.995	1.00	99.5	100	1	75.0-125			0.852	20
Arsenic, Dissolved	1.00	ND	1.02	1.04	102	104	1	75.0-125			2.04	20
Barium, Dissolved	1.00	0.0146	1.04	1.05	102	104	1	75.0-125			1.29	20
Boron, Dissolved	1.00		0.956	0.959	95.6	95.9	1	75.0-125			0.304	20
Cadmium, Dissolved	1.00	ND	0.994	1.00	99.4	100	1	75.0-125			0.945	20
Calcium, Dissolved	10.0		29.4	29.5	94.0	94.2	1	75.0-125			0.0457	20
Lead, Dissolved	1.00	ND	0.927	0.954	92.7	95.4	1	75.0-125			2.90	20
Magnesium, Dissolved	10.0		21.6	21.6	94.6	94.8	1	75.0-125			0.0763	20
Manganese, Dissolved	1.00		0.981	0.994	97.9	99.2	1	75.0-125			1.27	20
Molybdenum, Dissolved	1.00		1.01	1.02	101	102	1	75.0-125			0.743	20
Selenium, Dissolved	1.00	ND	1.00	0.994	100	99.4	1	75.0-125			0.647	20
Sodium, Dissolved	10.0		10.5	10.5	98.6	98.6	1	75.0-125			0.0365	20

ACCOUNT:

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PROJECT:

SDG:

DATE/TIME:

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WG2132924

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1655739-01,02,03,04,05,06

Method Blank (MB)

(MB) R3975191-1 09/19/23 22:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U	0.0793	1.00	
Magnesium	U	0.0853	1.00	
Sodium	U	0.504	3.00	

Laboratory Control Sample (LCS)

(LCS) R3975191-2 09/19/23 22:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10.0	9.80	98.0	80.0-120	
Magnesium	10.0	9.85	98.5	80.0-120	
Sodium	10.0	9.80	98.0	80.0-120	

L1655684-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1655684-05 09/19/23 22:49 • (MS) R3975191-4 09/19/23 22:54 • (MSD) R3975191-5 09/19/23 22:57

Analyte	Spike Amount mg/l	Original Result	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	10.0	52.8	53.1	53.1	95.1	98.0	1	75.0-125	0.551		0.551	20
Magnesium	10.0	37.7	37.8	37.8	95.3	96.8	1	75.0-125	0.407		0.407	20
Sodium	10.0	33.0	33.3	33.3	98.1	101	1	75.0-125	0.825		0.825	20

ACCOUNT:

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WG2134562

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1655739-07.08.09.10.11

Method Blank (MB)

(MB) R3976045-1 09/21/23 09:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony, Dissolved	U		0.00430	0.0100
Arsenic, Dissolved	U		0.00440	0.0100
Barium, Dissolved	U		0.000736	0.00500
Boron, Dissolved	U		0.0200	0.200
Cadmium, Dissolved	U		0.000479	0.00200
Calcium, Dissolved	U		0.0793	1.00
Iron, Dissolved	U		0.0180	0.100
Lead, Dissolved	U		0.00299	0.00600
Magnesium, Dissolved	U		0.0853	1.00
Manganese, Dissolved	U		0.000934	0.0100
Molybdenum, Dissolved	U		0.00116	0.00500
Potassium, Dissolved	U		0.261	2.00
Selenium, Dissolved	U		0.00735	0.0100
Sodium, Dissolved	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R3976045-2 09/21/23 09:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %
Antimony, Dissolved	1.00	1.00	100	80.0-120
Arsenic, Dissolved	1.00	1.00	100	80.0-120
Barium, Dissolved	1.00	1.03	103	80.0-120
Boron, Dissolved	1.00	0.974	97.4	80.0-120
Cadmium, Dissolved	1.00	0.970	97.0	80.0-120
Calcium, Dissolved	10.0	9.75	97.5	80.0-120
Iron, Dissolved	10.0	9.75	97.5	80.0-120
Lead, Dissolved	1.00	0.965	96.5	80.0-120
Magnesium, Dissolved	10.0	9.71	97.1	80.0-120
Manganese, Dissolved	1.00	0.972	97.2	80.0-120
Molybdenum, Dissolved	1.00	1.00	100	80.0-120
Potassium, Dissolved	10.0	9.59	95.9	80.0-120
Selenium, Dissolved	1.00	0.989	98.9	80.0-120
Sodium, Dissolved	10.0	9.82	98.2	80.0-120

WG2134562

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1655739-07.08.09.10.11

L1655773-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1655773-08 09/21/23 09:55 • (MS) R3976045-4 09/21/23 10:00 • (MSD) R3976045-5 09/21/23 10:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony, Dissolved	1.00	ND	1.01	1.01	101	101	1	75.0-125			0.140	20
Arsenic, Dissolved	1.00	ND	0.999	1.02	99.1	101	1	75.0-125			2.15	20
Barium, Dissolved	1.00	0.0752	1.08	1.09	101	102	1	75.0-125			1.18	20
Boron, Dissolved	1.00	ND	0.990	1.01	95.5	97.2	1	75.0-125			1.75	20
Cadmium, Dissolved	1.00	ND	0.962	0.975	96.2	97.5	1	75.0-125			1.39	20
Calcium, Dissolved	10.0	46.6	55.7	55.8	90.9	92.1	1	75.0-125			0.211	20
Iron, Dissolved	10.0	ND	9.60	9.74	95.6	97.0	1	75.0-125			1.43	20
Lead, Dissolved	1.00	ND	0.952	0.965	95.2	96.5	1	75.0-125			1.32	20
Magnesium, Dissolved	10.0	6.85	16.1	16.3	93.0	94.4	1	75.0-125			0.876	20
Manganese, Dissolved	1.00	ND	0.952	0.961	94.9	95.8	1	75.0-125			0.863	20
Molybdenum, Dissolved	1.00	ND	1.01	1.01	101	100	1	75.0-125			0.266	20
Potassium, Dissolved	10.0	2.87	12.2	12.3	92.9	94.8	1	75.0-125			1.53	20
Selenium, Dissolved	1.00	ND	0.992	1.02	99.2	102	1	75.0-125			2.45	20
Sodium, Dissolved	10.0	12.2	21.4	21.5	91.3	92.7	1	75.0-125			0.686	20

WG2134579

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1655739-07,08,09,10,11

Method Blank (MB)

(MB) R3975181-1 09/19/23 17:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U	0.0793	1.00	
Magnesium	U	0.0853	1.00	
Sodium	0.603	0.504	3.00	

Laboratory Control Sample (LCS)

(LCS) R3975181-2 09/19/23 17:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10.0	10.0	100	80.0-120	
Magnesium	10.0	9.95	99.5	80.0-120	
Sodium	10.0	10.3	103	80.0-120	

L1656157-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1656157-01 09/20/23 12:27 • (MS) R3975498-5 09/20/23 13:35 • (MSD) R3975498-6 09/20/23 13:38

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	10.0	1940	1970	2030	281	901	50	75.0-125	V	V	3.11	20
Magnesium	10.0	162	174	177	118	151	50	75.0-125	V	V	1.86	20
Sodium	10.0	17400	17500	18100	1090	7540	50	75.0-125	V	V	3.62	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

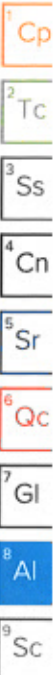
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

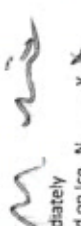
Alabama	40660	Nebraska	NE-05-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AJ30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: American Environmental - CO 8191 Southpark Lane Suite 107 Littleton, CO 80120		Billing Information: Accounts Payable 8191 Southpark Lane Suite 107 Littleton, CO 80120		Chain of Custody Page <u> 1 </u> of <u> 1 </u>  PEOPLE ADVANCING SCIENCE MT JULIET, TN 1205 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf	
Report to: Skyler Elder Project Description: Keenesburg Mine		City/State Collected: Keenesburg, CO Please Circle: <u>PT</u> <u>CT</u> <u>ET</u>		PH-108014321 TRC-2382462 CR6-20221V	
Client Project # 303-948-7733		Lab Project # AMEENVLCO-KEENESBURG		SDG # L1655734 D067	
Collected by (print): Ryan P. Smith		Site/Facility ID #		Acctnum: AMEENVLCO Template: T160430 Prelogin: P1021785 PM: 824 - Chris Ward PB:	
Collected by (signature): 		Quote #		Shipped Via: FedEx Ground Remarks	
Immediately Packed on Ice <u> N </u> <u> Y </u>		Rush? (Lab MUST Be Notified) <u> Same Day </u> <u> Five Day </u> <u> Next Day </u> <u> 10 Day (Rad Only) </u> <u> Two Day </u> <u> 10 Day (Rad Only) </u> <u> Three Day </u>		Sample # (lab only)	
Sample ID		Comp/Grab		Matrix *	
Date		Depth		Date	
No. of		Date Results Needed		Time	
Centrs		Time		Time	
PC-1		GW		9/13/23 8:45	
PC-2		GW		9/13/23 9:30	
PC-5		GW		9/13/23 12:30	
PC-6		GW		9/12/23 12:30	
AMW-1		GW		9/12/23 12:00	
AMW-2		GW		9/13/23 9:00	
SMW-2		GW		9/13/23 11:45	
DUP		GW		9/12/23 12:00	
FPW		GW		9/12/23 13:00	
Remarks: Diss Metals=As,Ba,Ca,Cd,Fe,Kd,Mg,Mn,Na,Pb,Sb,Se PC-1,PC-2PC-6,AMW-1,AMW-2,SMW-2: Fluoride, SBDICP, BDICP, KDICP AMW-1,AMW-2,SMW-2,FPW,DH-96,DH-122: ALKOH, ALK		Tracking #		Received by: (Signature) 	
Relinquished by: (Signature) 		Date: 9/13/23		Time: 16:30	
Relinquished by: (Signature)		Date:		Time:	
Relinquished by: (Signature)		Date:		Time:	

Company Name/Address: American Environmental - CO 8191 Southpark Lane Suite 107 Littleton, CO 80120		Billing Information: Accounts Payable 8191 Southpark Lane Suite 107 Littleton, CO 80120		Chain of Custody Page <u>1</u> of <u>1</u> Pace PEOPLE ADVANCING SCIENCE 12005 Johnson Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://pace.globals.com/html/par-standard-terms.pdf	
Project Description: Keenesburg Mine		City/State CO		Project Circle: PT MT CT ET	
Report to: Skyler Elder		Email To: selder@aeddenver.com; cahrenden@aeddenver.com		Lab Project # AMEENVLCO-KEENESBURG	
Phone: 303-948-7733		Client Project #		Site/Facility ID #	
Collected by (print): Ryan D. Smith		Quote #		P.O. #	
Collected by (signature): 		Rush? (Lab MUST Be Notified) Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day ☐		Date Results Needed	
Immediately Packed on Ice ☒ N ☐ Y ☐		No. of		Time	
Sample ID		Comp/Grab		Matrix *	
Depth		Date		Time	
DH-96		GW		9/13/23 14:15	
DH-122		GW		9/13/23 15:45	
GW		GW		6	
Remarks		Sample # (lab only)		Shipped Via: FedEx Ground	
SDG # <u>4655739</u>		Table #		Acctnum: AMEENVLCO	
Template: T160430		Prelogin: P1021785		PM: 824 - Chris Ward	
PB:		Shipped Via: FedEx Ground		Sample # (lab only)	
Analysis / Container / Preservative		Pres Chk		Analysis / Container / Preservative	
Diss Metals 250mHDPE-NoPres		Diss Metals 250mHDPE-NoPres		Diss Metals 250mHDPE-NoPres	
CI,F,SO4 125mHDPE-NoPres		CI,F,SO4 125mHDPE-NoPres		CI,F,SO4 125mHDPE-NoPres	
ALKBI,ALKCA 250mHDPE-NoPres		ALKBI,ALKCA 250mHDPE-NoPres		ALKBI,ALKCA 250mHDPE-NoPres	
SAR 250mHDPE-HNO3		SAR 250mHDPE-HNO3		SAR 250mHDPE-HNO3	
TDS 1L-HDPE-NoPres		TDS 1L-HDPE-NoPres		TDS 1L-HDPE-NoPres	
V8260 40mIamb-HCl-Bik		V8260 40mIamb-HCl-Bik		V8260 40mIamb-HCl-Bik	
pH		Temp		pH	
Flow		Other		Flow	
Samples returned via:		Tracking #		Samples returned via:	
Date: 9/13/23		Date: 9/13/23		Date: 9/13/23	
Relinquished by: (Signature)		Relinquished by: (Signature)		Relinquished by: (Signature)	
Relinquished by: (Signature)		Relinquished by: (Signature)		Relinquished by: (Signature)	
Relinquished by: (Signature)		Relinquished by: (Signature)		Relinquished by: (Signature)	
Trip Blank Received: Yes (NO)		Trip Blank Received: Yes (NO)		Trip Blank Received: Yes (NO)	
Temp:		Temp:		Temp:	
Date: 9/14/23		Date: 9/14/23		Date: 9/14/23	
Condition:		Condition:		Condition:	

Tracking

Numbers

4730 8344 4925

4730 8344 4925

3.8+0=3.8

0.3+0=0.3

DRA2

4655739

9/14-NCF-L1655739 AMEENVICO TD	
R5	
Time estimate: 0h	
Time spent: 0h	
Members	
Troy Dunlap (responsible) CW Chris Ward	
☒ Login Clarification needed ☐ Chain of custody is incomplete ☐ Please specify Metals requested ☐ Please specify TCLP requested ☐ Received additional samples not listed on COC ☐ Sample IDs on containers do not match IDs on COC ☐ Client did not "X" analysis ☐ Chain of Custody is missing ☐ If no COC: Received by: _____ ☐ If no COC: Date/Time: _____ ☐ If no COC: Temp./Cont.Rec./pH: _____ ☐ If no COC: Carrier: _____ ☐ If no COC: Tracking #: _____ ☐ Client informed by call ☐ Client informed by Email ☐ Client informed by Voicemail ☐ Date/Time: _____ ☐ PM initials: _____ ☐ Client Contact: _____	
Comments	
14 September 2023 3:17 PM Troy Dunlap Cooler 684183444855 is delayed. Did not receive PC-2, PC-5, SMW-2, DH-96 and DH-122.	
15 September 2023 3:15 PM Chris Ward 684183444855 here today. Please keep me updated	
15 September 2023 3:19 PM Troy Dunlap Unpacking now. Temperature is 1.5°C.	
15 September 2023 4:23 PM Troy Dunlap Added to SDG.	
19 September 2023 11:09 AM Chris Ward So this one done?	

Troy Dunlap

Yes.

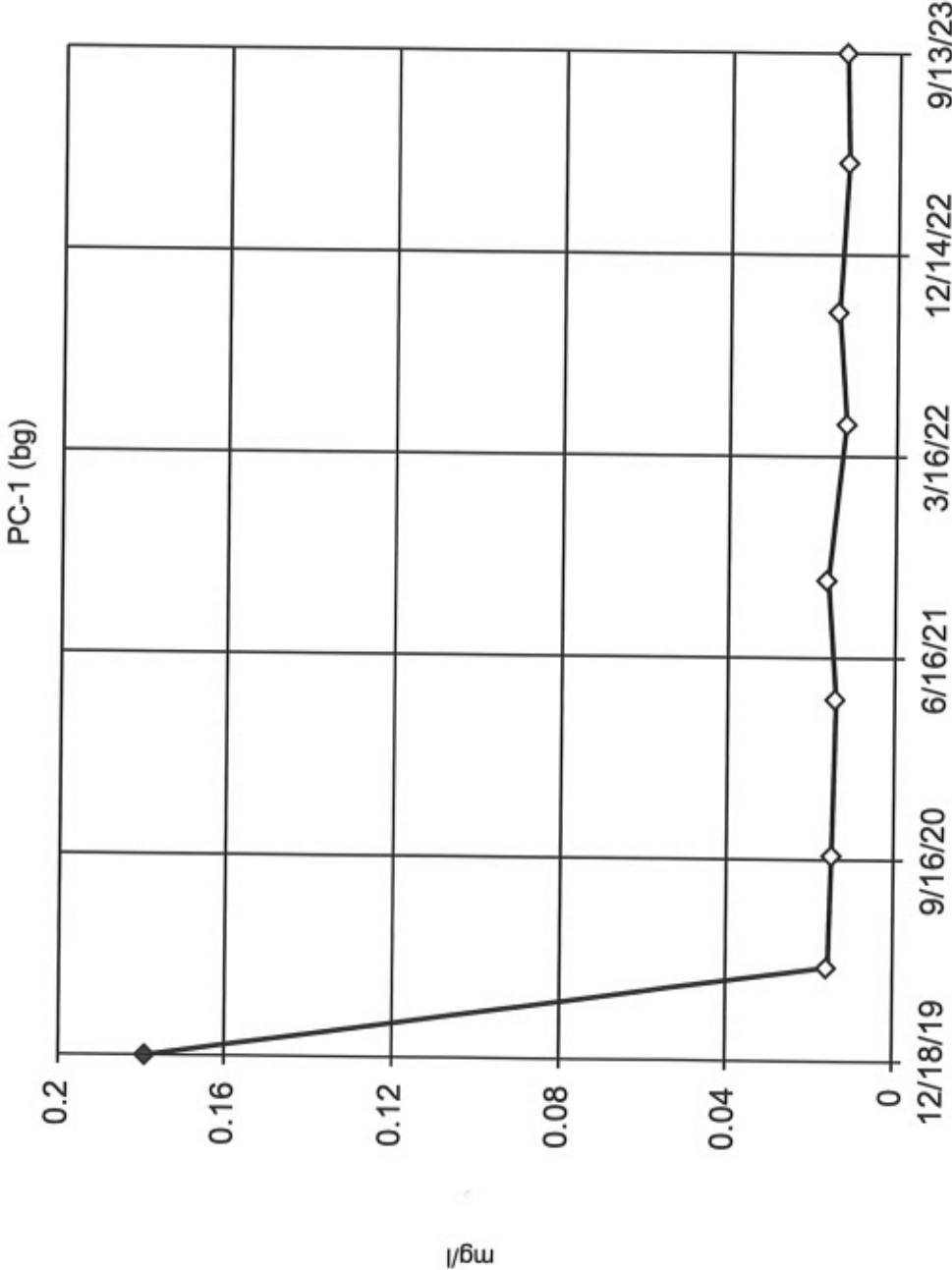
19 September 2023 4:10 PM

ATTACHMENT 4.0
STATISTICAL CHARTS

ATTACHMENT 4.1

INTERWELL BACKGROUND OUTLIER CHARTS

Dixon's Outlier Test



n = 9

Statistical outlier is drawn as solid.

Testing for 1 high outlier.

Mean = 0.03236.

Std. Dev. = 0.05501.

0.179: c = 0.9754

tab1 = 0.512.

Alpha = 0.05.

Normality test used:

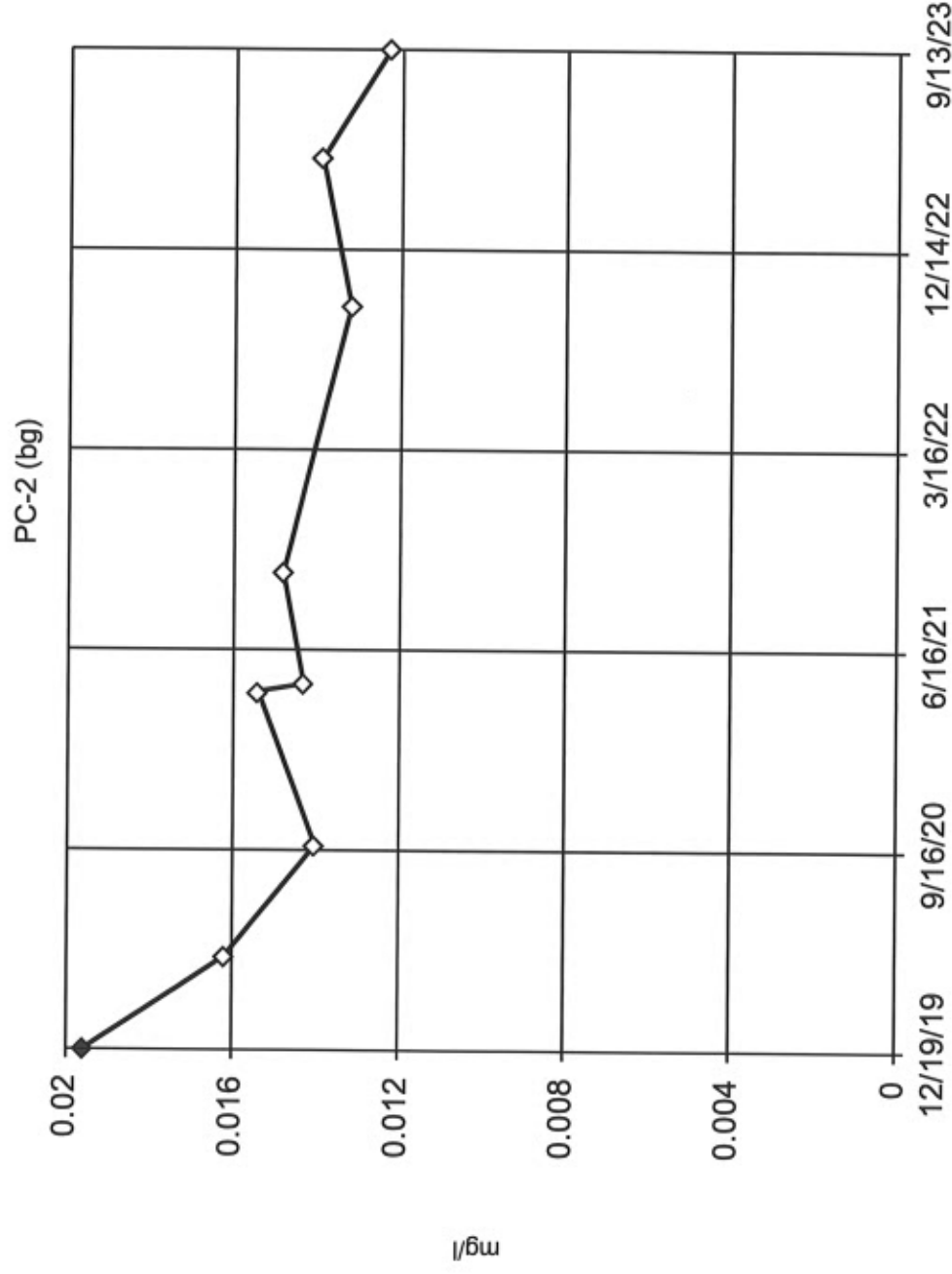
Shapiro Wilk@alpha = 0.1

Calculated = 0.9333

Critical = 0.851

The distribution, after removal of suspect value, was found to be normally distributed.

Dixon's Outlier Test



n = 9

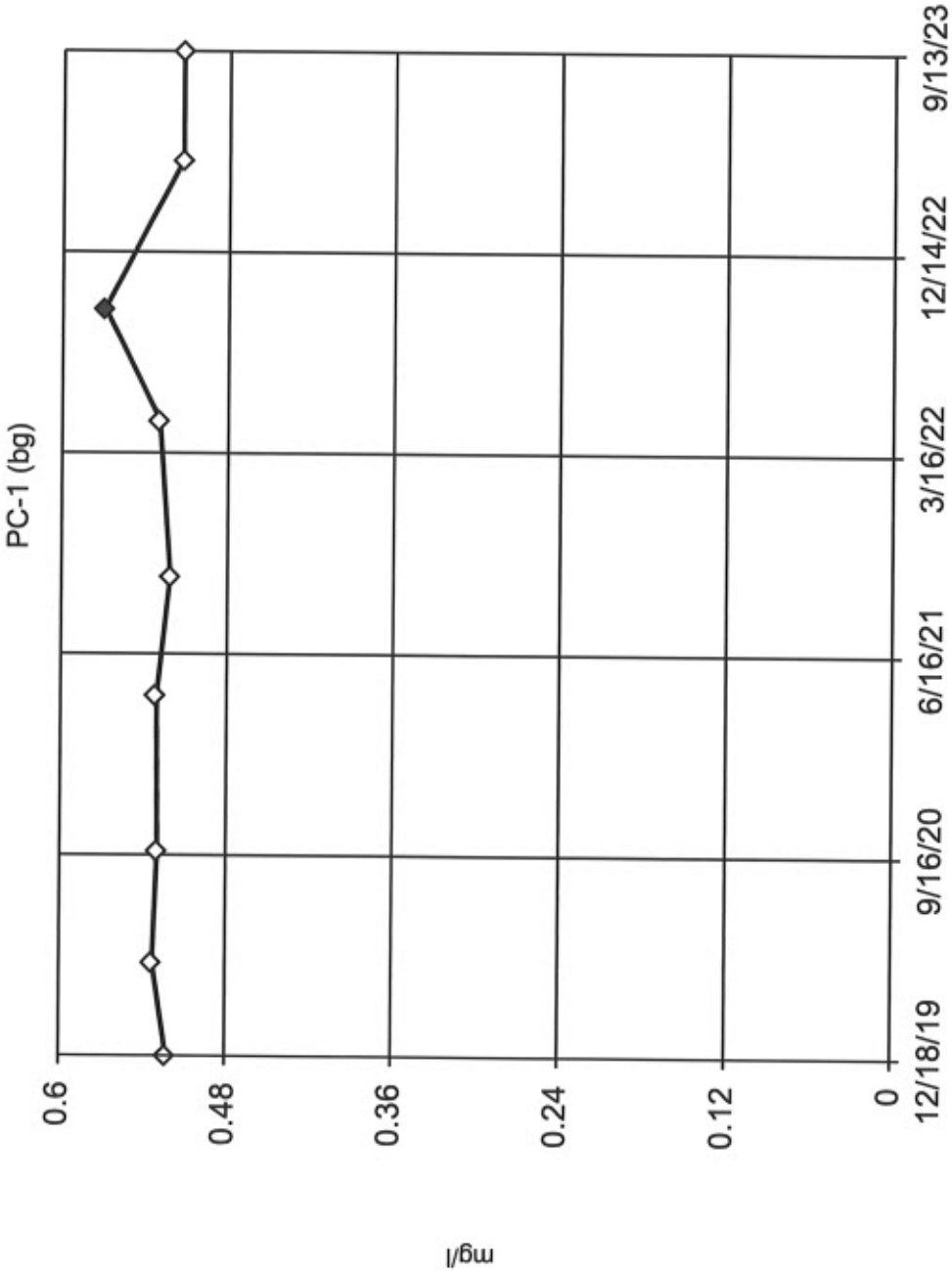
Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.01486.
Std. Dev. = 0.002117.
0.0196: c = 0.5313
tab1 = 0.512.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9919
Critical = 0.851
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 11/22/2023 3:48 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

Dixon's Outlier Test



n = 9

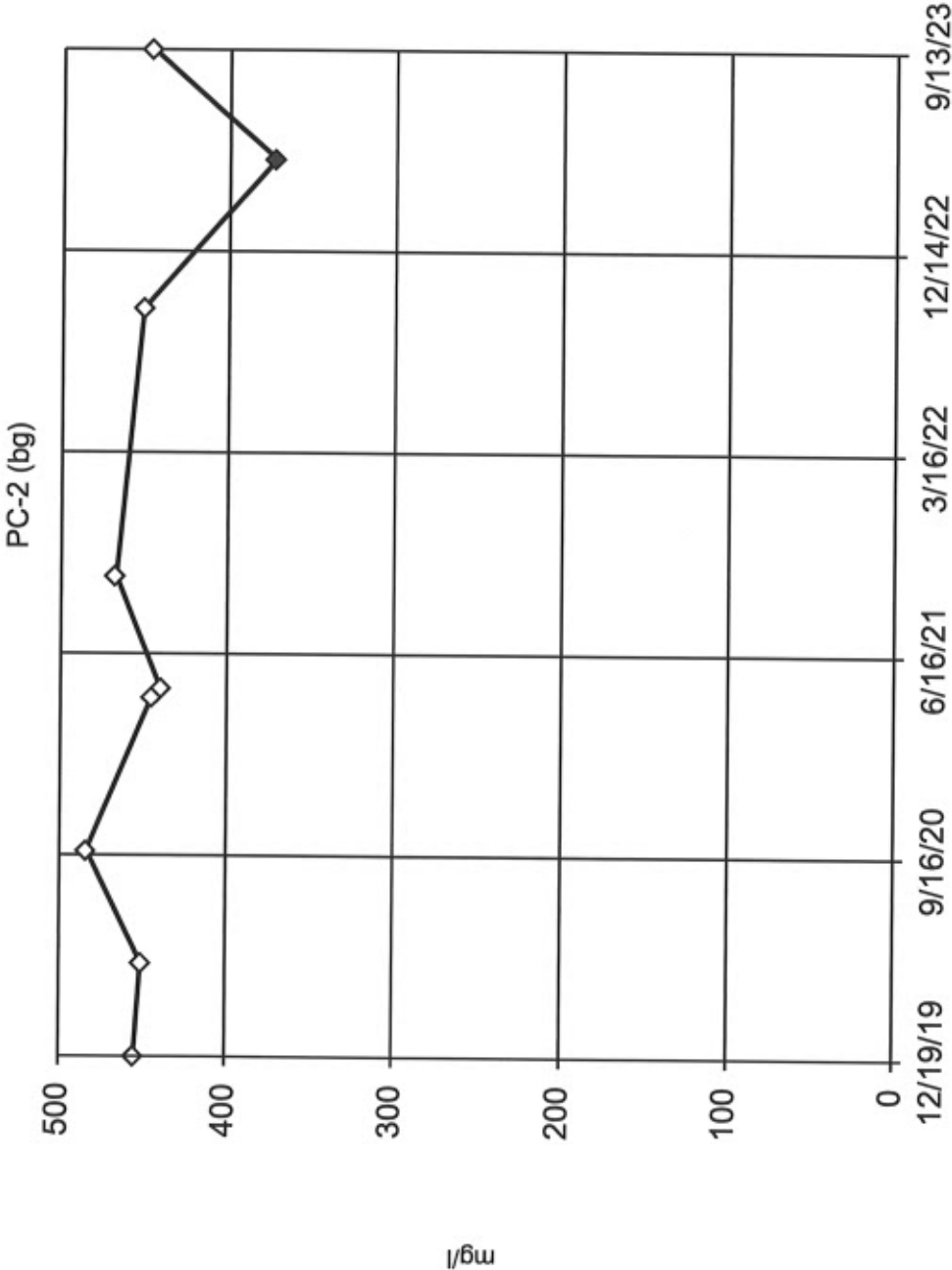
Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.5287.
Std. Dev. = 0.01671.
0.569: c = 0.6607
tab1 = 0.512.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8626
Critical = 0.851
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 11/22/2023 3:48 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

Dixon's Outlier Test



n = 9

Statistical outlier is drawn as solid.

Testing for 1 low outlier.

Mean = 445.7.

Std. Dev. = 30.68.

372: c = 0.7158

tab1 = 0.512.

Alpha = 0.05.

Normality test used:

Shapiro Wilk@alpha = 0.1

Calculated = 0.8687

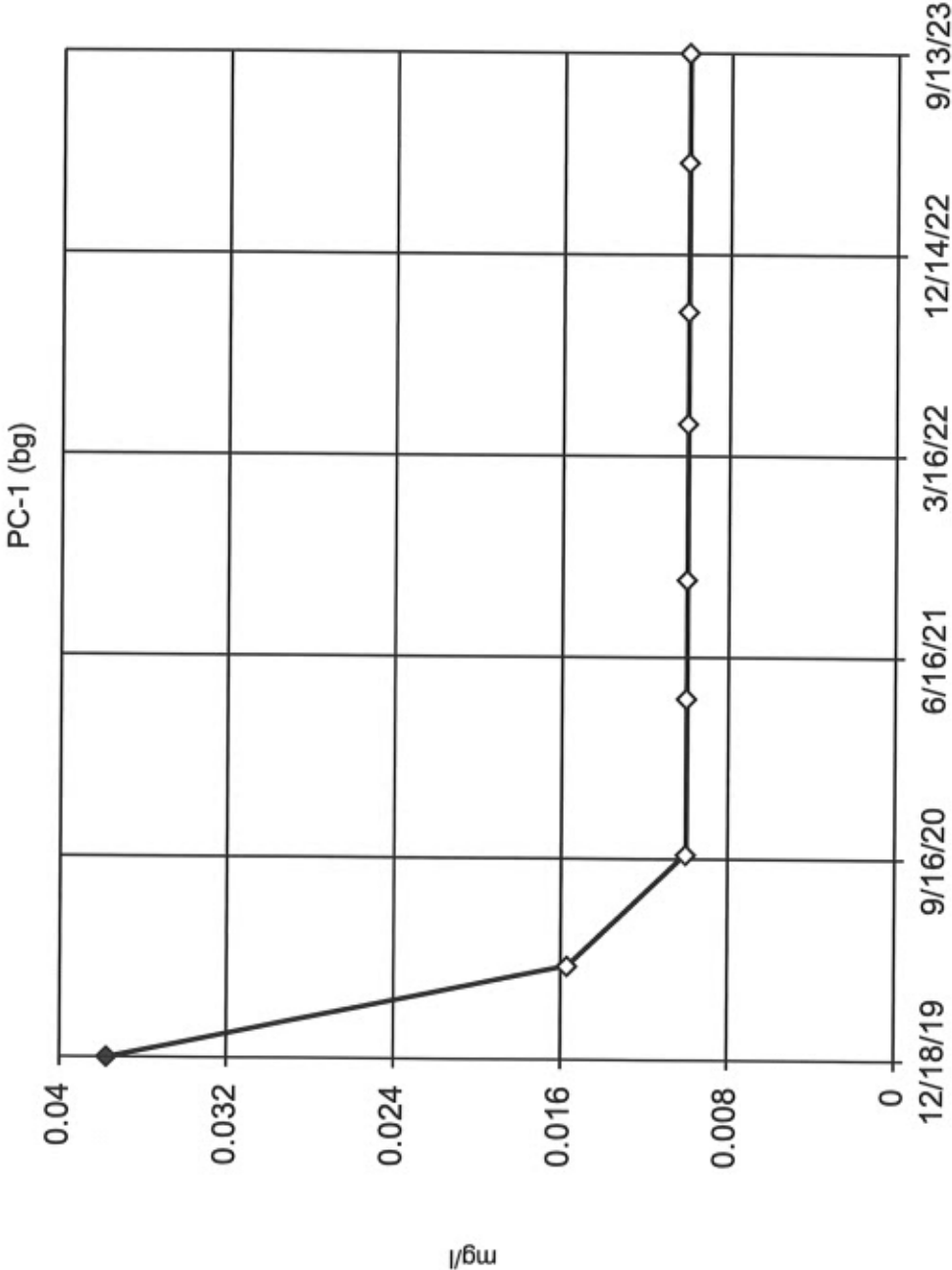
Critical = 0.851

The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 11/22/2023 3:48 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

Tukey's Outlier Screening



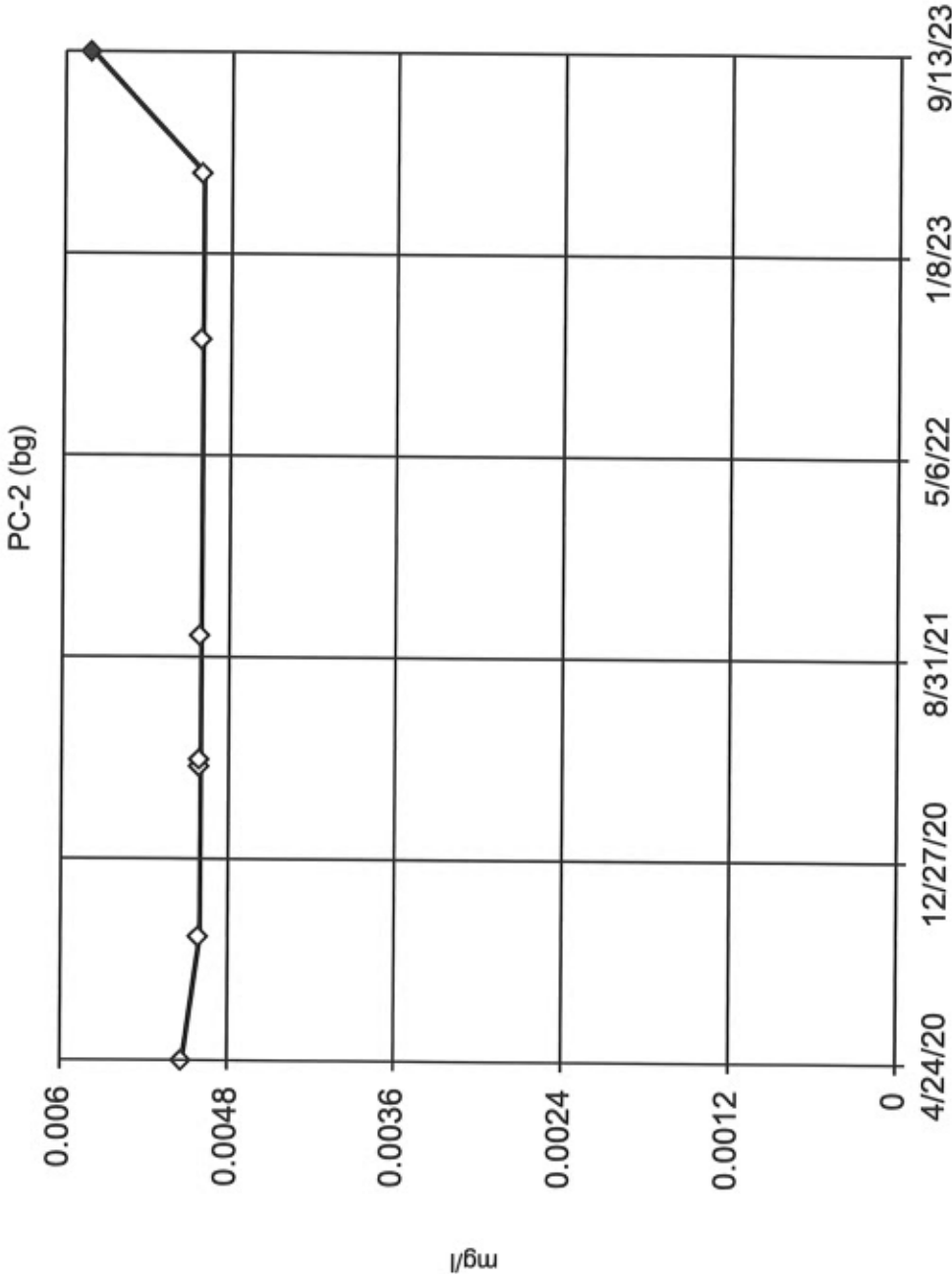
n = 9

Outlier is drawn as solid. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.02465, low cutoff = 0.005083, based on IQR multiplier of 3.

Tukey's Outlier Screening



n = 8

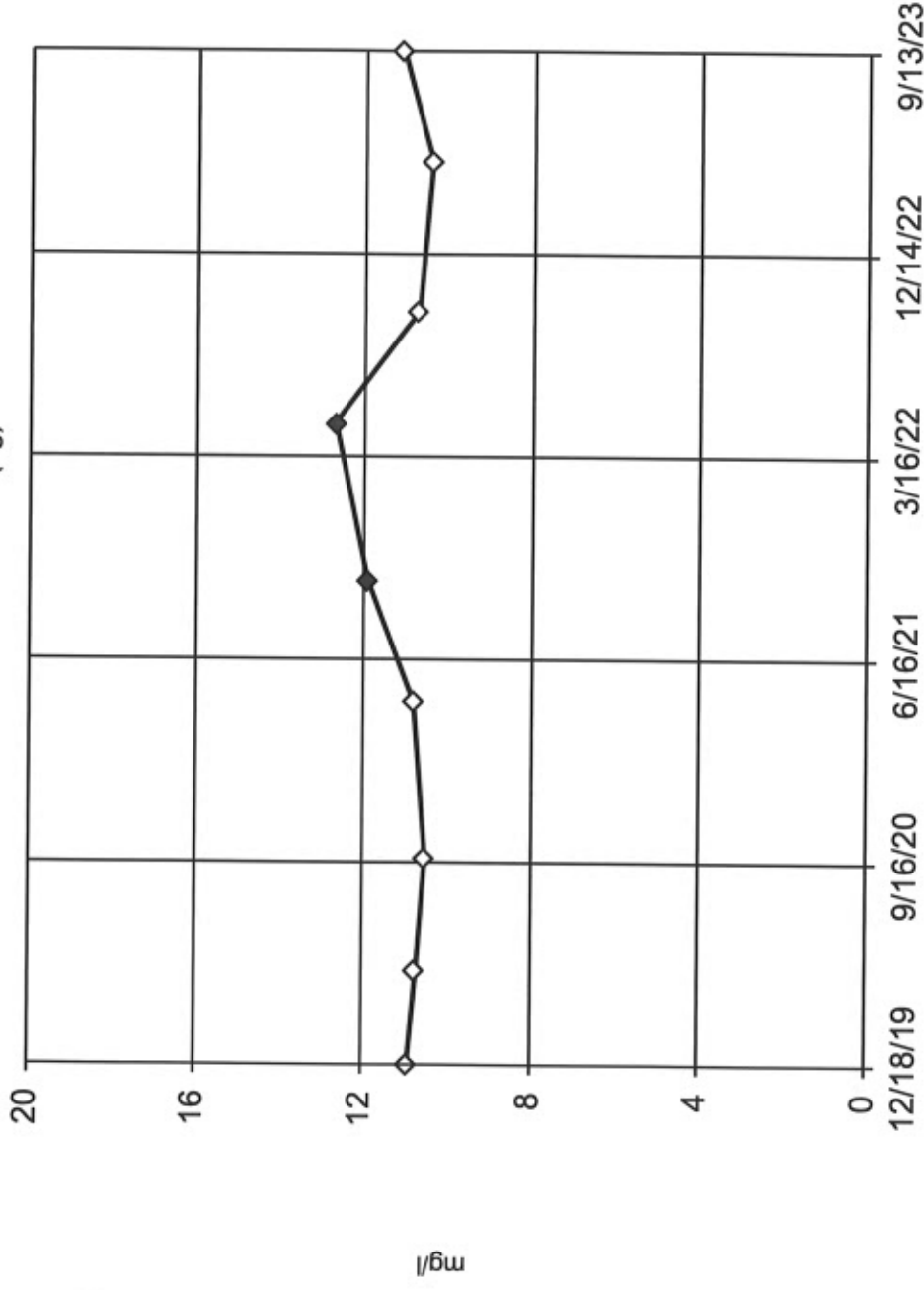
Outlier is drawn as solid. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.005243, low cutoff = 0.004825, based on IQR multiplier of 3.

Dixon's Outlier Test

PC-1 (bg)



n = 9

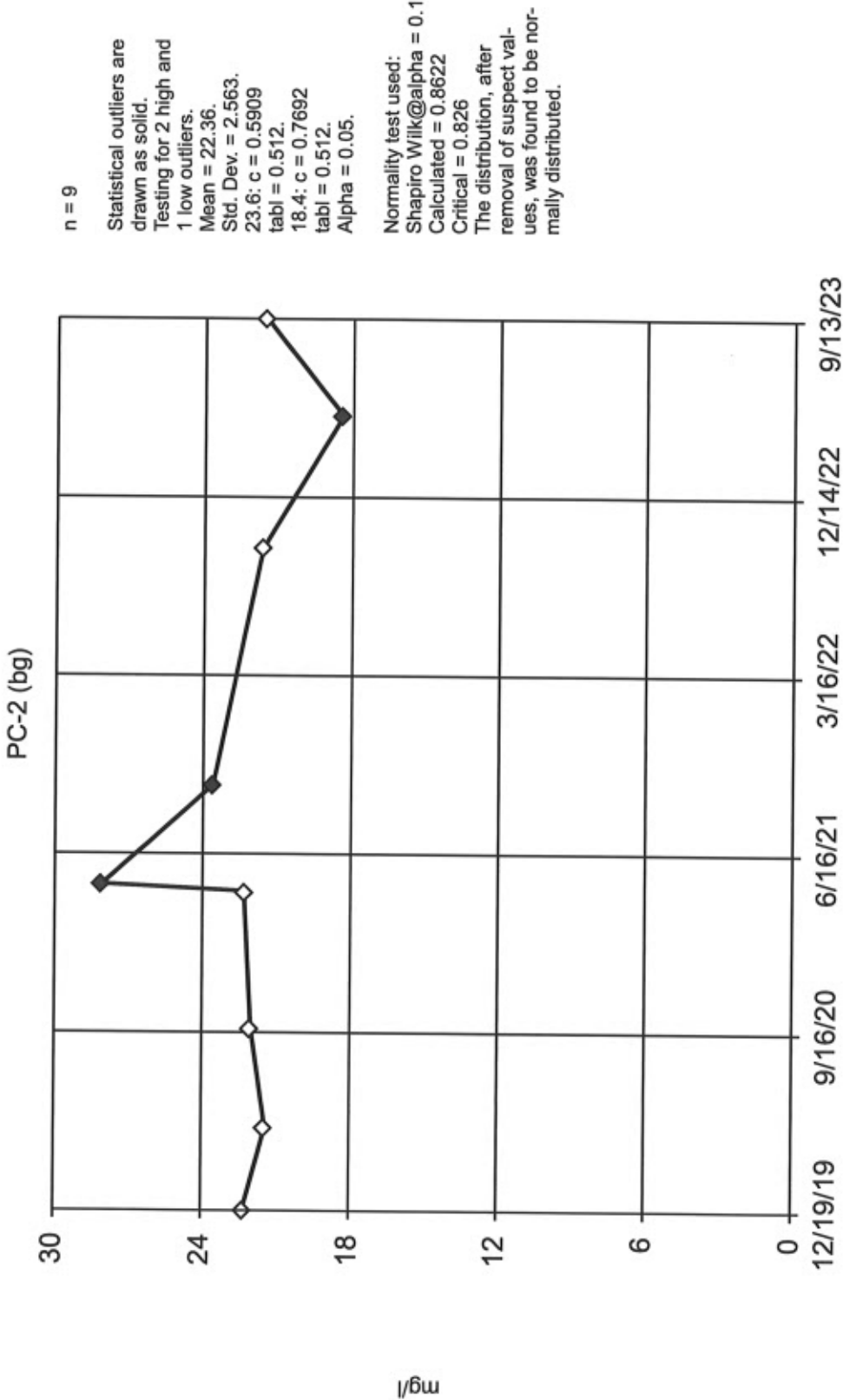
Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 11.08.
Std. Dev. = 0.7496.
11.9: c = 0.5714
tab1 = 0.512.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9773
Critical = 0.838
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Potassium Analysis Run 11/22/2023 3:48 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

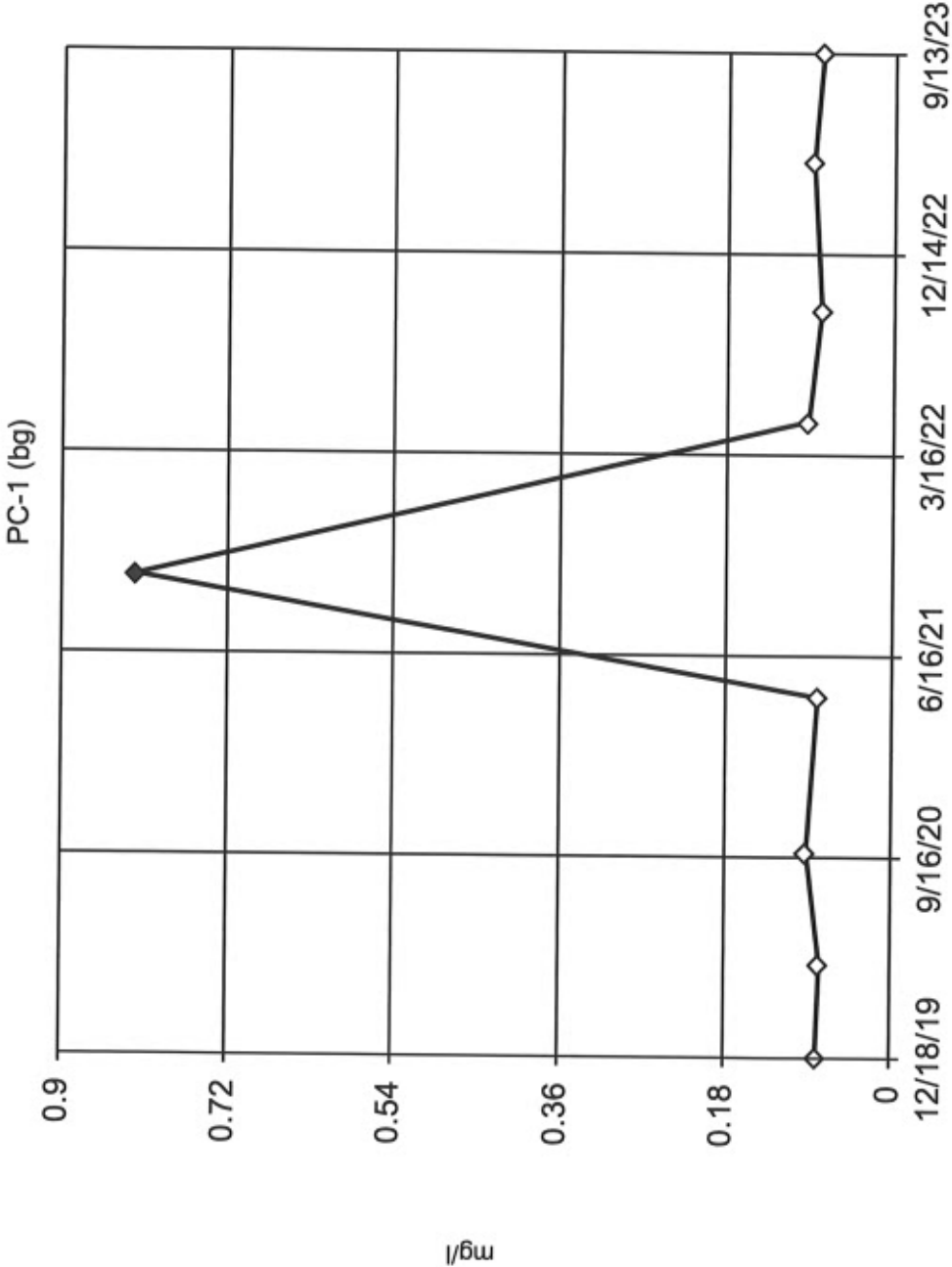
Dixon's Outlier Test



Constituent: Potassium Analysis Run 11/22/2023 3:49 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

Tukey's Outlier Screening



n = 9

Outlier is drawn as solid.
Tukey's method used in
lieu of parametric test
because the Shapiro Wilk
normality test failed
at the 0.1 alpha level.

Data were natural log
transformed to achieve
best W statistic (graph
shown in original units).

High cutoff = 0.1504,
low cutoff = 0.04691,
based on IQR multiplier
of 3.

Constituent: Selenium Analysis Run 11/22/2023 3:49 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

Outlier Analysis

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023 Printed 11/22/2023, 3:50 PM

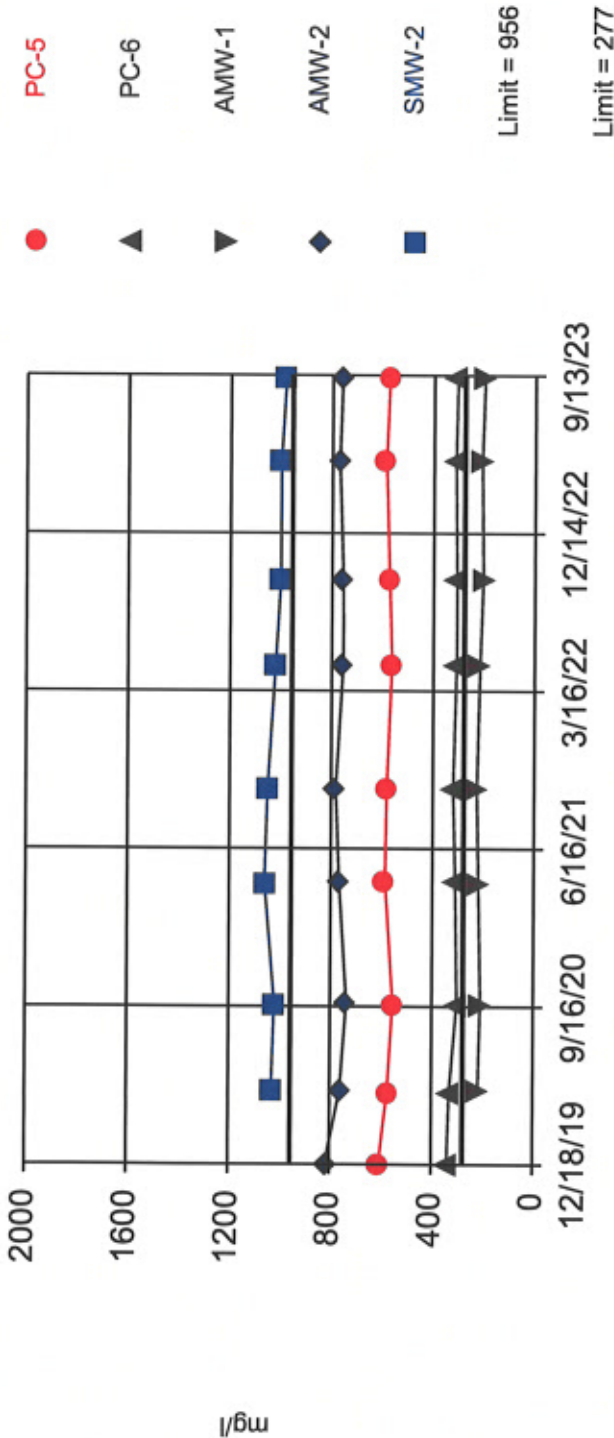
Constituent	Well	Outlier	Value(s)	Date(s)	Method	N
Alkalinity, Bicarbonate (mg/l)	PC-1 (bg)	No	n/a	n/a	EPA 1989	9
Alkalinity, Bicarbonate (mg/l)	PC-2 (bg)	No	n/a	n/a	EPA 1989	9
Alkalinity, Carbonate (mg/l)	PC-1 (bg)	n/a	n/a	n/a	NP (nm)	9
Alkalinity, Carbonate (mg/l)	PC-2 (bg)	n/a	n/a	n/a	NP (nm)	9
Arsenic (mg/l)	PC-1 (bg)	n/a	n/a	n/a	NP (nm)	9
Arsenic (mg/l)	PC-2 (bg)	n/a	n/a	n/a	NP (nm)	9
Barium (mg/l)	PC-1 (bg)	Yes	0.179	12/18/2019	Dixon's	9
Barium (mg/l)	PC-2 (bg)	Yes	0.0196	12/19/2019	Dixon's	9
Boron (mg/l)	PC-1 (bg)	Yes	0.569	9/28/2022	Dixon's	9
Boron (mg/l)	PC-2 (bg)	No	n/a	n/a	EPA 1989	9
Cadmium (mg/l)	PC-1 (bg)	n/a	n/a	n/a	NP (nm)	9
Cadmium (mg/l)	PC-2 (bg)	n/a	n/a	n/a	NP (nm)	9
Calcium (mg/l)	PC-1 (bg)	No	n/a	n/a	EPA 1989	9
Calcium (mg/l)	PC-2 (bg)	Yes	372	4/18/2023	Dixon's	9
Chloride (mg/l)	PC-1 (bg)	No	n/a	n/a	EPA 1989	9
Chloride (mg/l)	PC-2 (bg)	No	n/a	n/a	EPA 1989	9
Flouride (mg/l)	PC-1 (bg)	No	n/a	n/a	EPA 1989	9
Flouride (mg/l)	PC-2 (bg)	No	n/a	n/a	EPA 1989	9
Iron (mg/l)	PC-1 (bg)	n/a	n/a	n/a	NP (nm)	9
Iron (mg/l)	PC-2 (bg)	n/a	n/a	n/a	NP (nm)	9
Lead (mg/l)	PC-1 (bg)	n/a	n/a	n/a	NP (nm)	9
Lead (mg/l)	PC-2 (bg)	n/a	n/a	n/a	NP (nm)	9
Magnesium (mg/l)	PC-1 (bg)	No	n/a	n/a	EPA 1989	9
Magnesium (mg/l)	PC-2 (bg)	No	n/a	n/a	EPA 1989	9
Manganese (mg/l)	PC-1 (bg)	Yes	0.0377	12/18/2019	NP (nm)	9
Manganese (mg/l)	PC-2 (bg)	No	n/a	n/a	Dixon's	9
Molybdenum (mg/l)	PC-1 (bg)	n/a	n/a	n/a	NP (nm)	8
Molybdenum (mg/l)	PC-2 (bg)	Yes	0.0058	9/13/2023	NP (nm)	8
Potassium (mg/l)	PC-1 (bg)	Yes	11.9,12.7	9/30/2021,5/1/2022	Dixon's	9
Potassium (mg/l)	PC-2 (bg)	Yes	23.6,28.1,18.4	9/30/2021,5/1/2021,4/...	Dixon's	9
Selenium (mg/l)	PC-1 (bg)	Yes	0.818	9/30/2021	NP (nm)	9
Selenium (mg/l)	PC-2 (bg)	No	n/a	n/a	NP (nm)	9
Sodium (mg/l)	PC-1 (bg)	No	n/a	n/a	EPA 1989	9
Sodium (mg/l)	PC-2 (bg)	No	n/a	n/a	NP (nm)	9
Sulfate (mg/l)	PC-1 (bg)	No	n/a	n/a	EPA 1989	9
Sulfate (mg/l)	PC-2 (bg)	No	n/a	n/a	Dixon's	9

ATTACHMENT 4.2
INTERWELL PREDICTION LIMITS

Exceeds Limits: AMW-1, SMW-2

Prediction Limit

Interwell Non-parametric

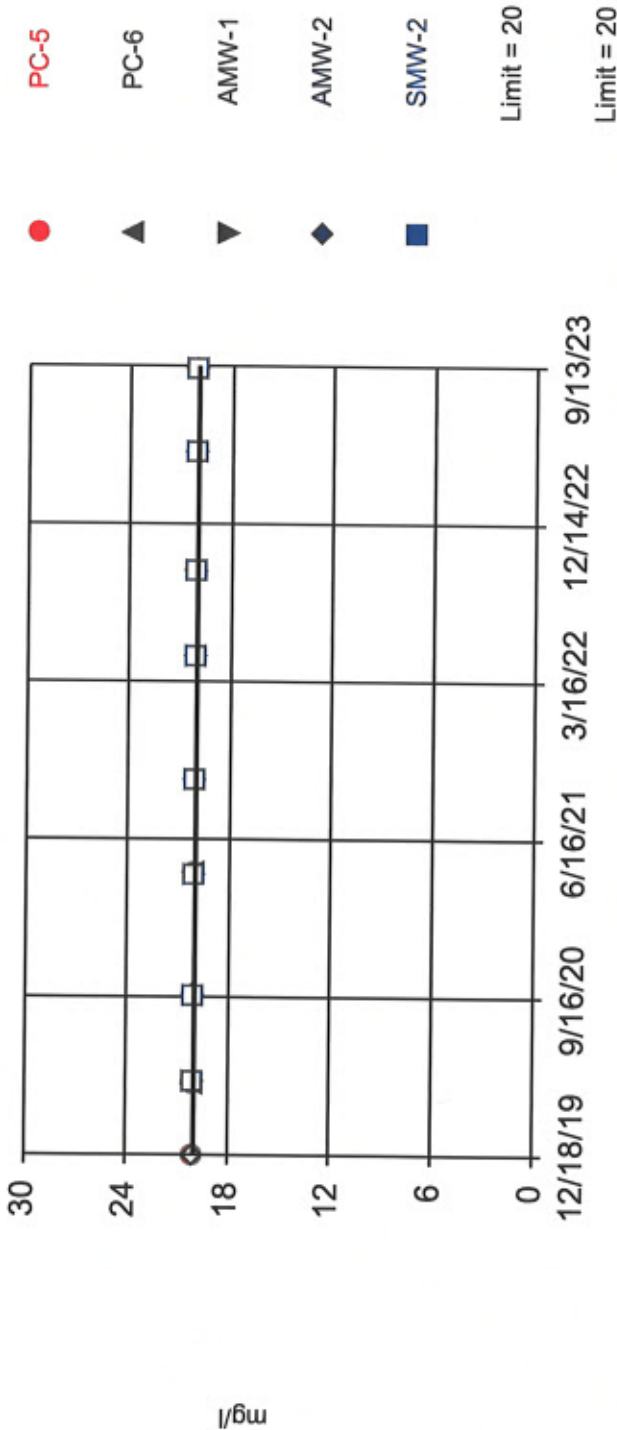


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 18 background values. Annual per-constituent alpha = 0.01087. Individual comparison alpha = 0.01086 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Within Limits

Prediction Limit

Interwell Non-parametric

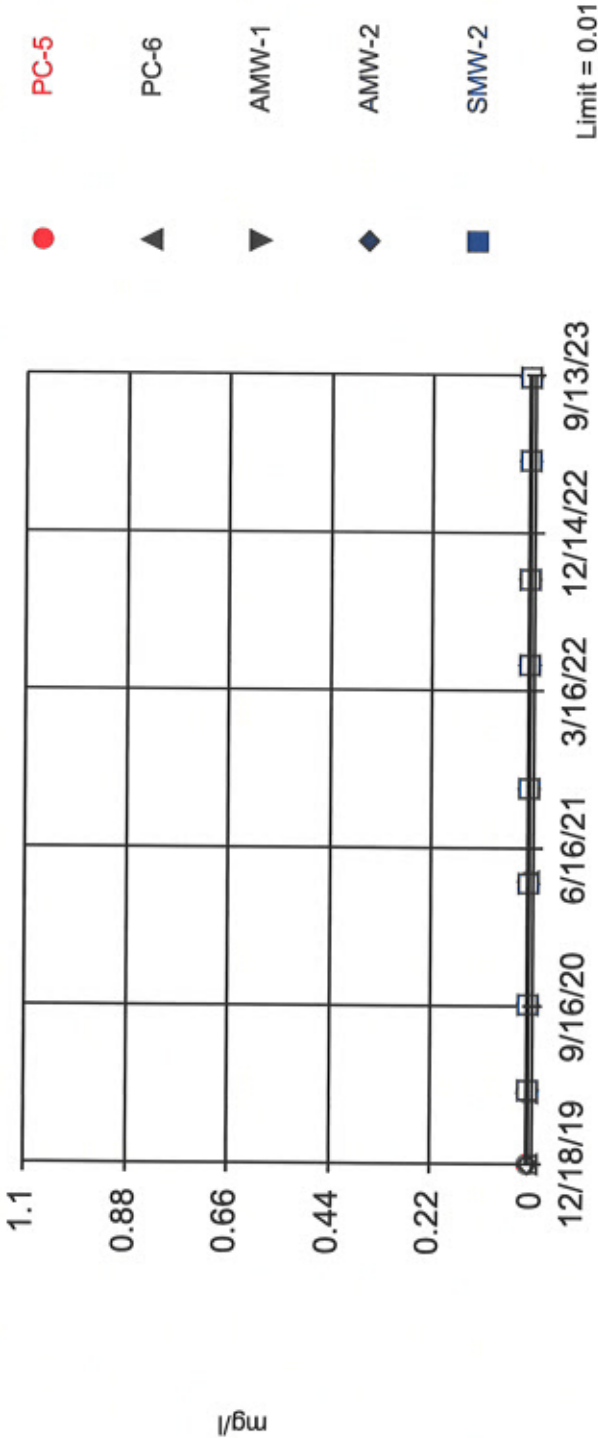


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 18$) were censored; limit is most recent reporting limit. Annual per-constituent $\alpha = 0.01087$. Individual comparison $\alpha = 0.01086$ (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 18$) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

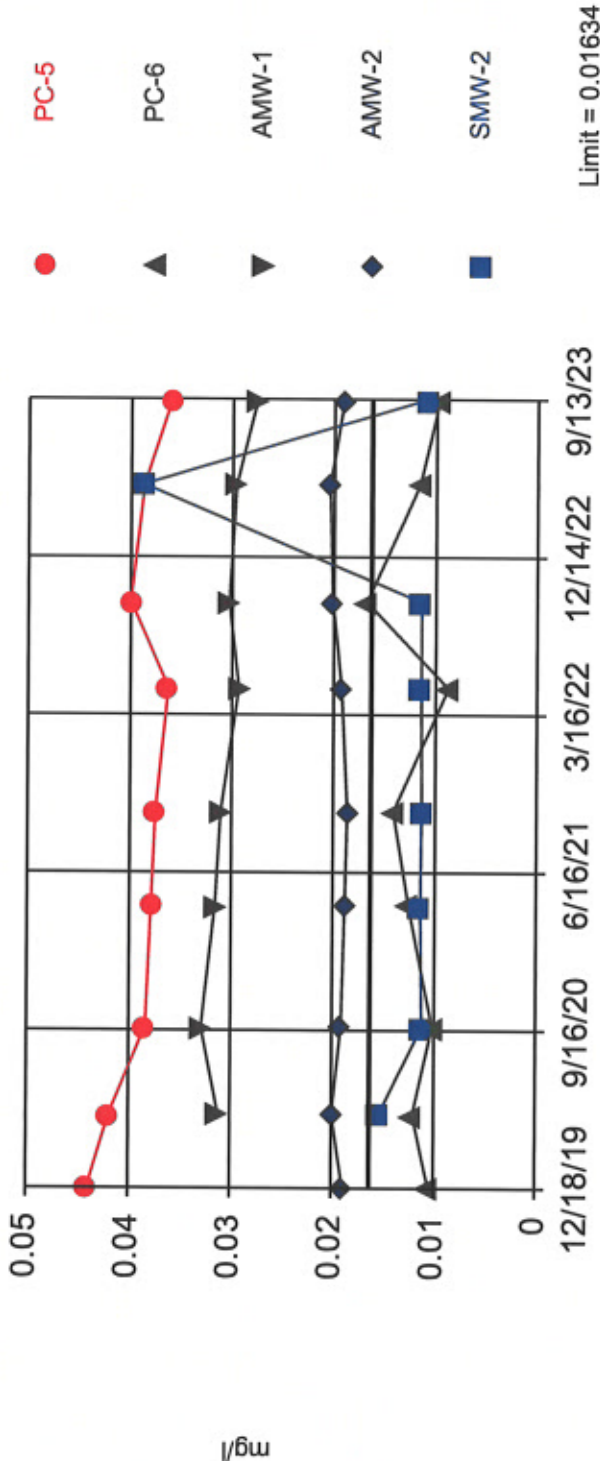
Constituent: Arsenic Analysis Run 11/24/2023 1:17 PM

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

Exceeds Limit: PC-5, AMW-1, AMW-2

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.01414, Std. Dev.=0.001388, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9506, critical = 0.844. Kappa = 1.58 (c=14, w=1, 1 of 2, event alpha = 0.1). Report alpha = 0.007498. Comparing 5 points to limit.

Constituent: Barium Analysis Run 11/24/2023 1:17 PM

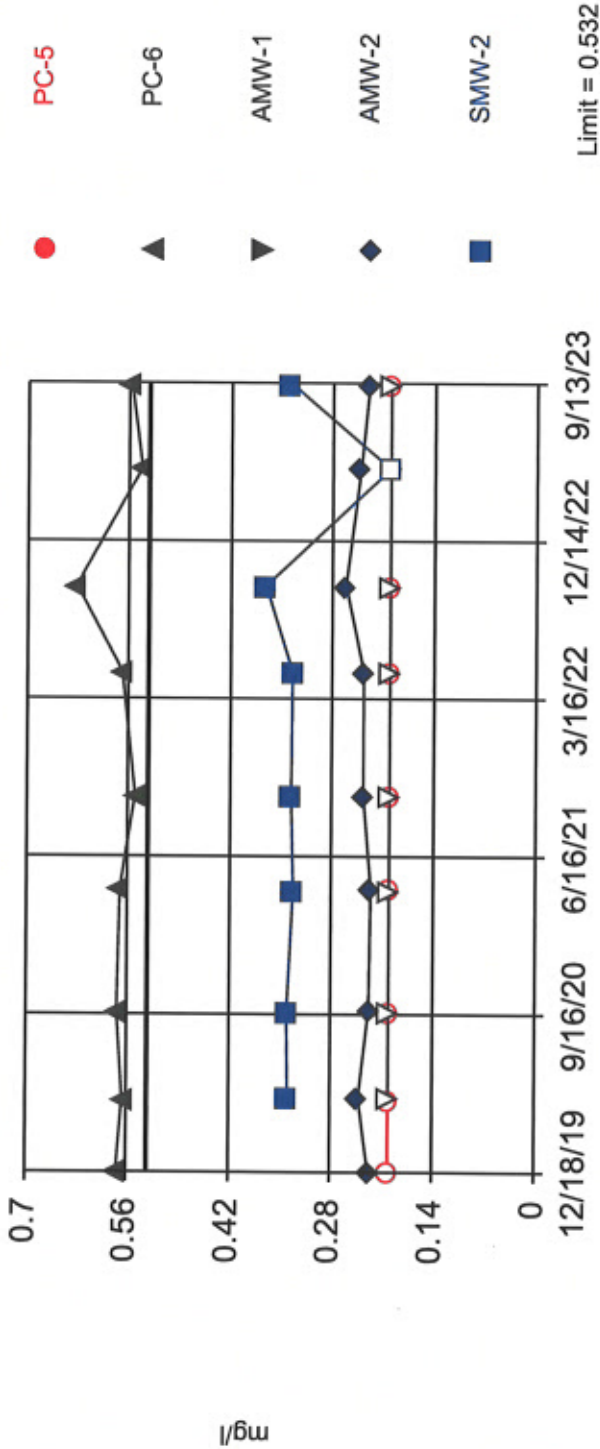
Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

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Hollow symbols indicate censored values.

Exceeds Limit: PC-6

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. Annual per-constituent alpha = 0.005984 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

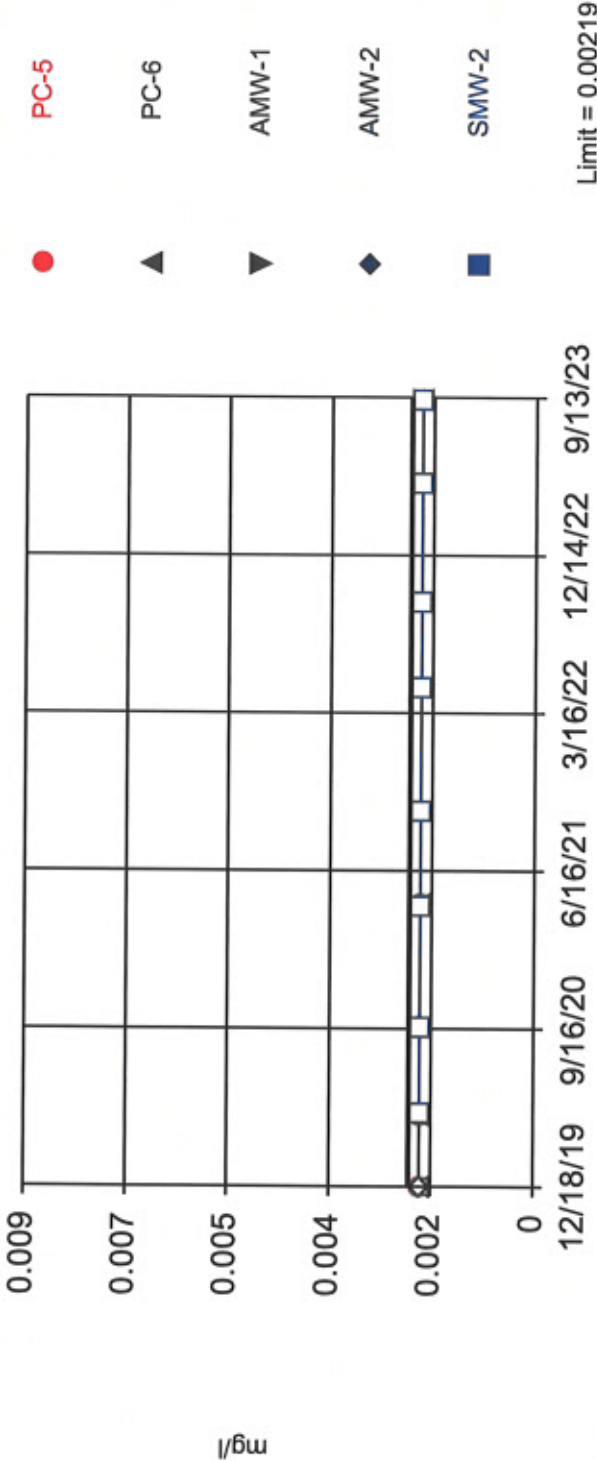
Constituent: Boron Analysis Run 11/24/2023 1:17 PM

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

Within Limit

Prediction Limit

Interwell Non-parametric

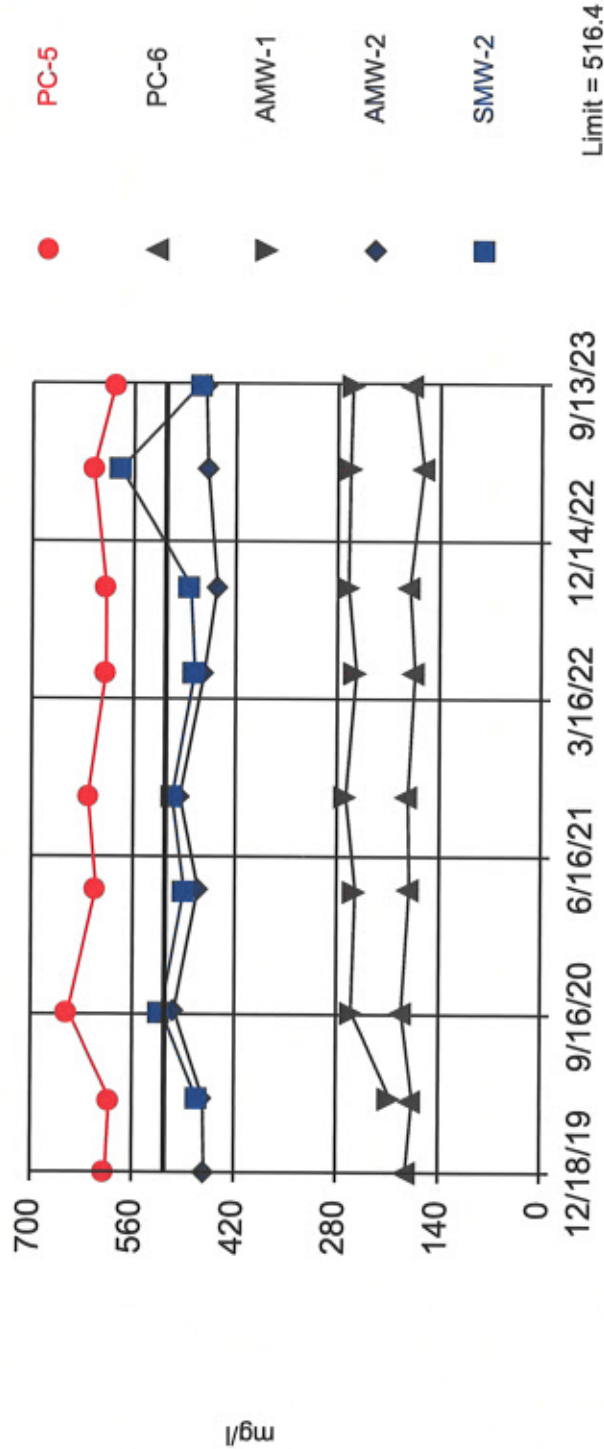


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 18 background values. 94.44% NDs. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Exceeds Limit: PC-5

Prediction Limit

Interwell Parametric

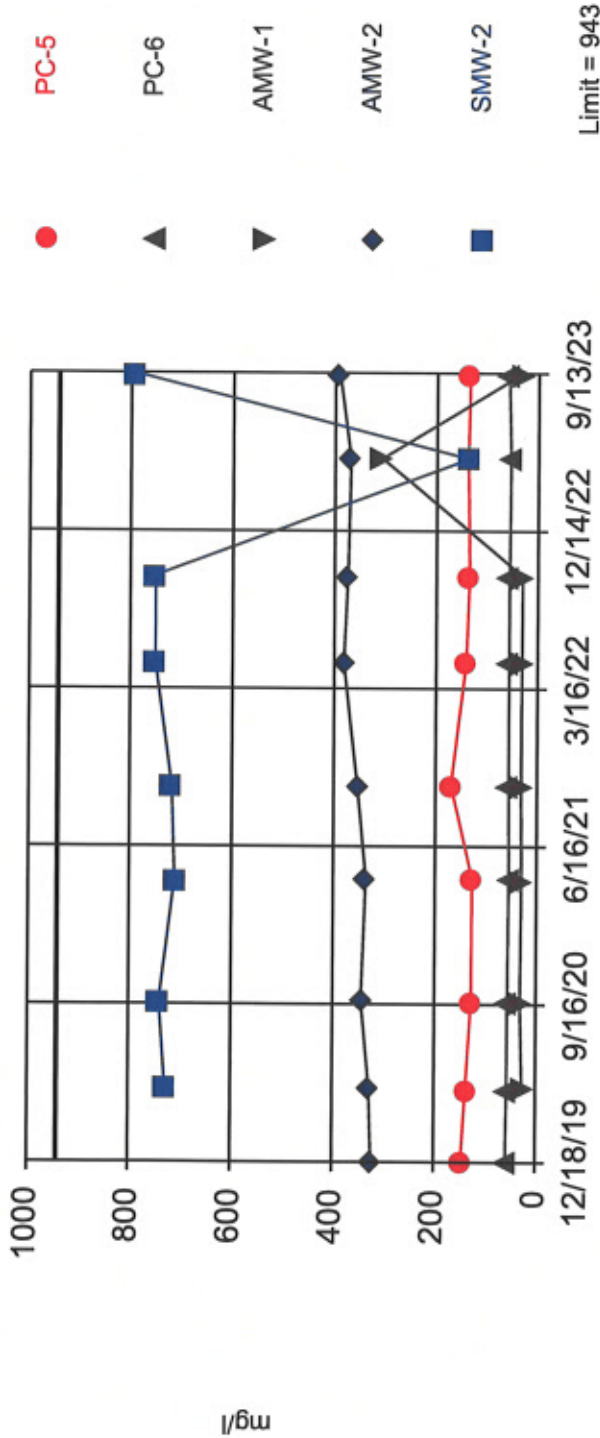


Background Data Summary: Mean=474.1, Std. Dev.=27.04, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9269, critical = 0.851. Kappa = 1.567 (c=14, w=1, 1 of 2, event alpha = 0.1). Report alpha = 0.007498. Comparing 5 points to limit.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

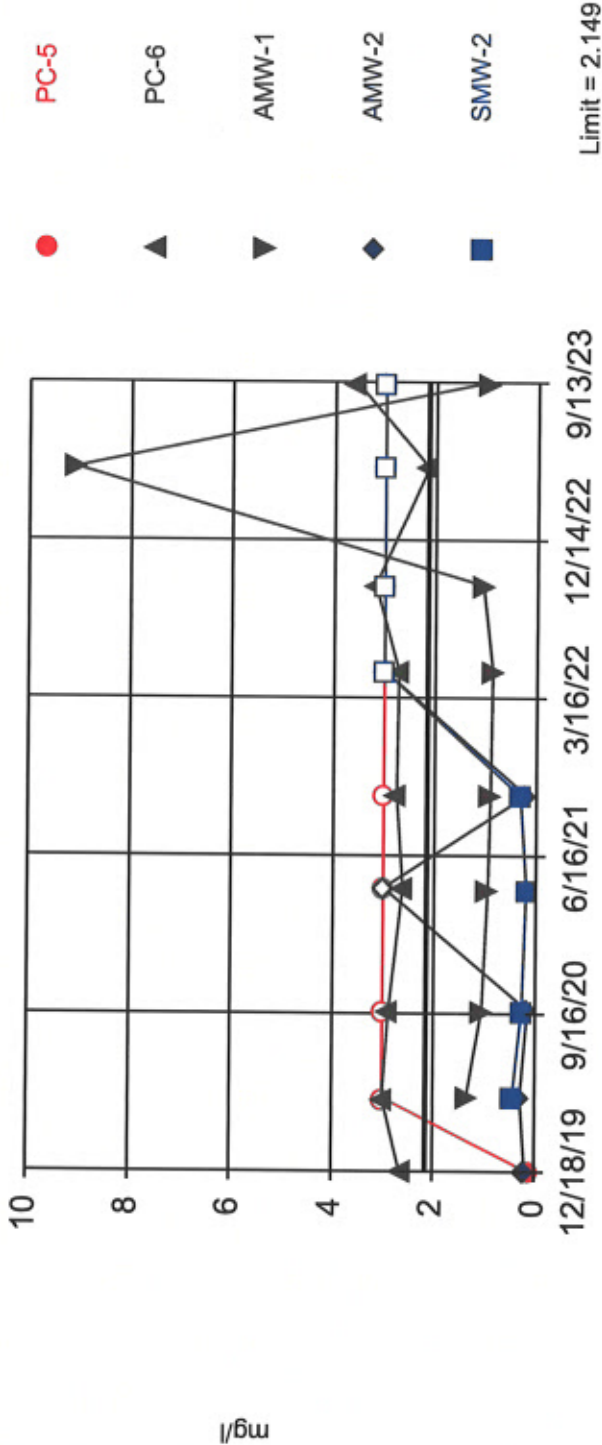
Constituent: Chloride Analysis Run 11/24/2023 1:17 PM

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

Exceeds Limit: PC-6

Prediction Limit

Interwell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=1.026, Std. Dev.=0.723, n=18, 27.78% NDs.
Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated =
0.8638, critical = 0.858. Kappa = 1.553 (c=14, w=1, 1 of 2, event alpha = 0.1). Report alpha = 0.007498. Comparing
5 points to limit.

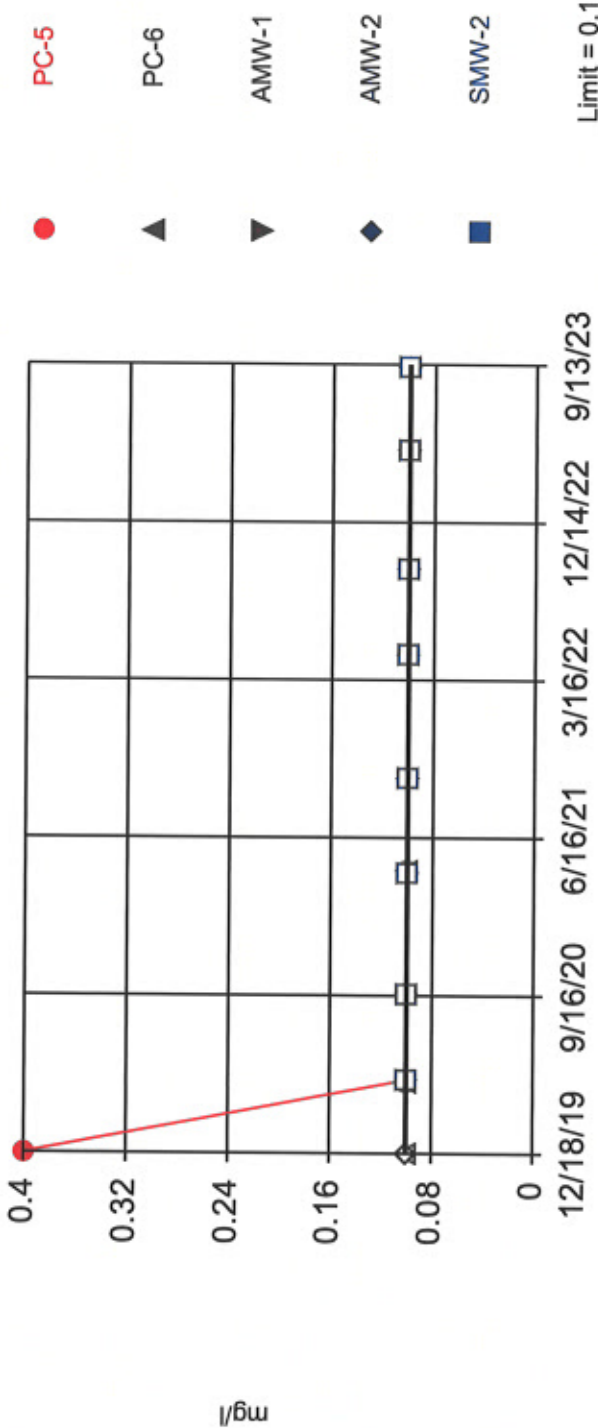
Constituent: Fluoride Analysis Run 11/24/2023 1:17 PM

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 18) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

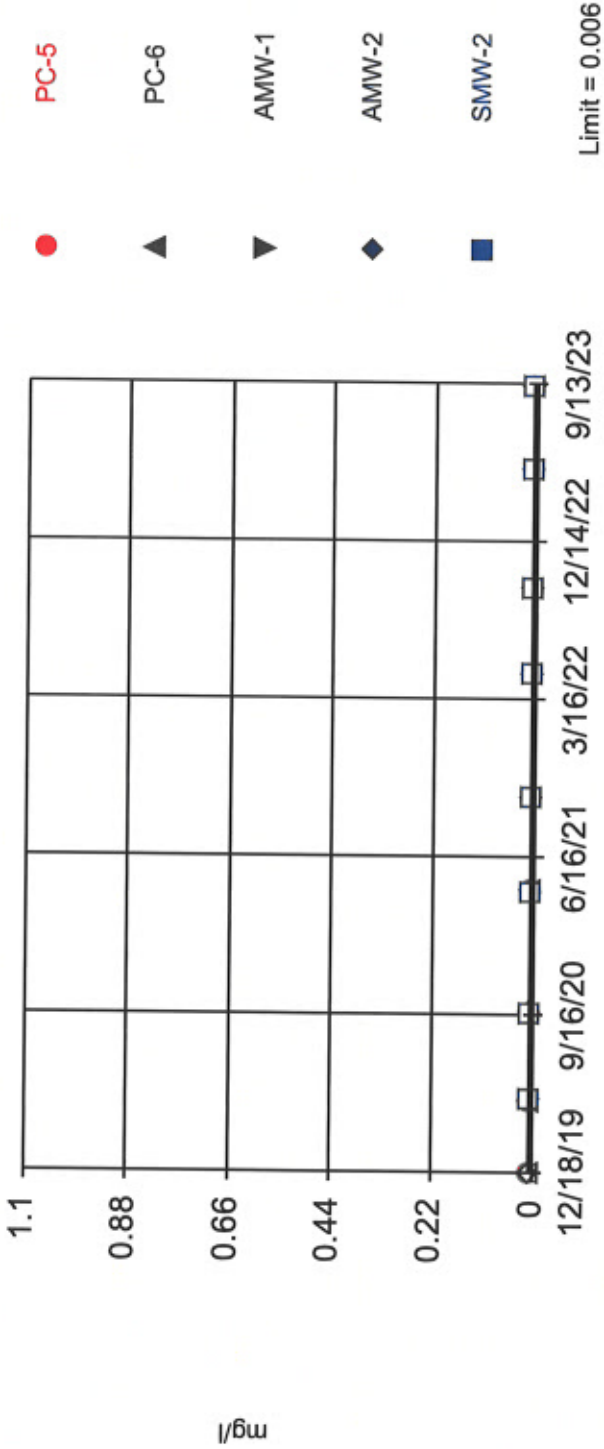
Constituent: Iron Analysis Run 11/24/2023 1:17 PM

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

Within Limit

Prediction Limit

Interwell Non-parametric

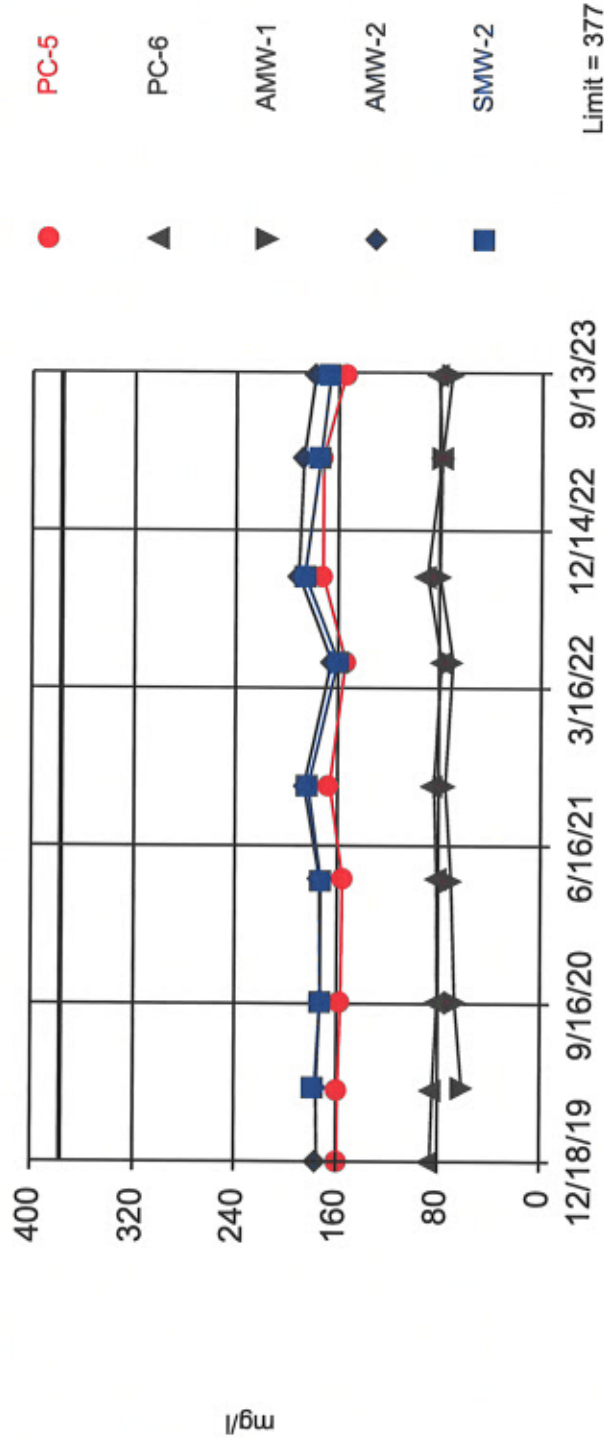


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 18) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Within Limit

Prediction Limit

Interwell Non-parametric



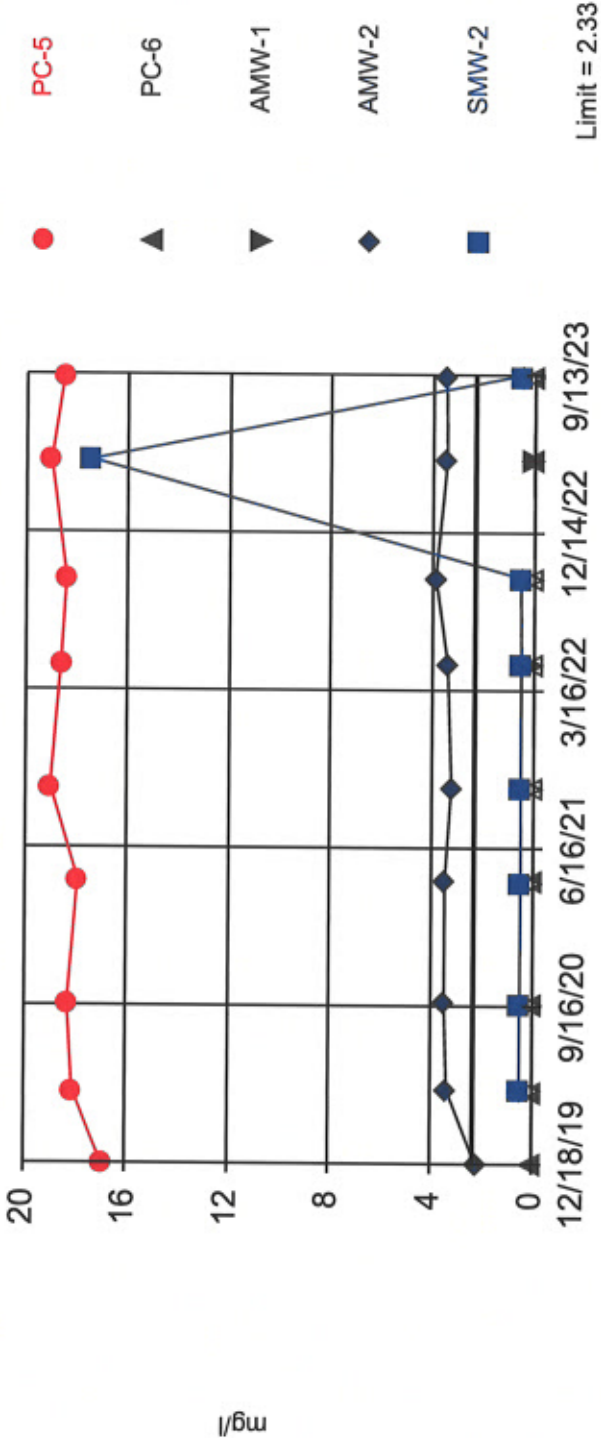
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

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Hollow symbols indicate censored values.

Exceeds Limit: PC-5, AMW-2

Prediction Limit

Interwell Non-parametric

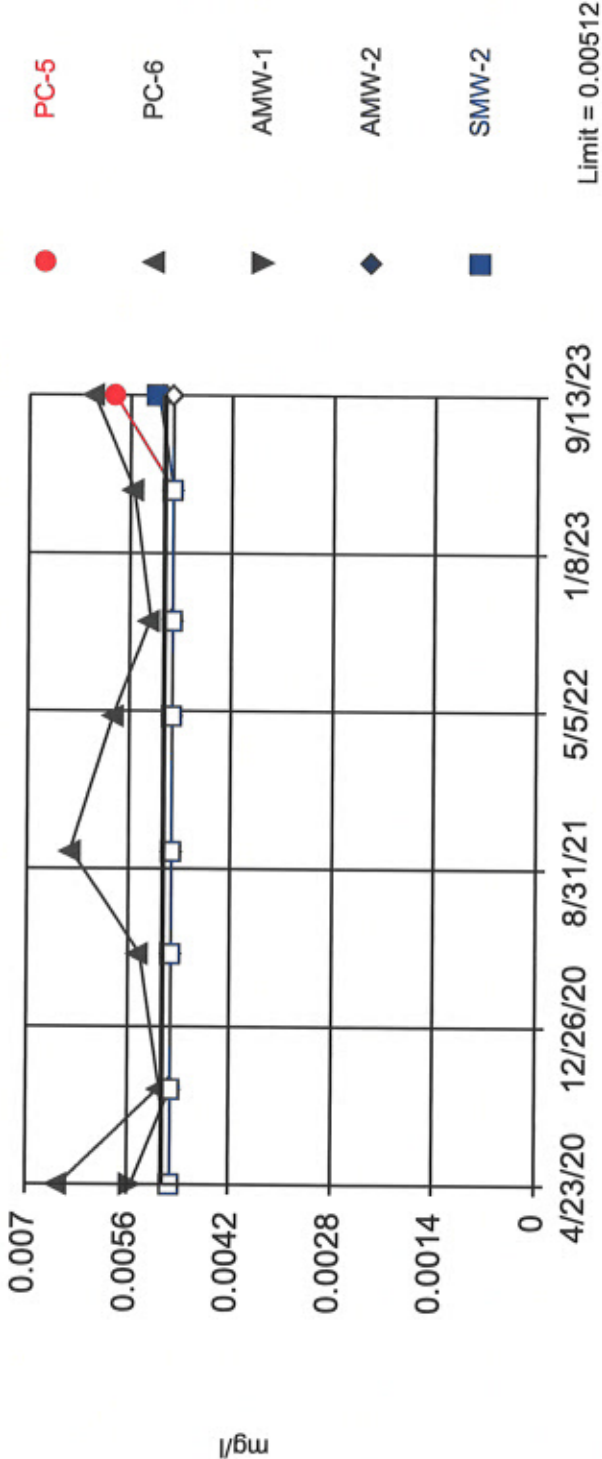


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 41.18% NDs. Annual per-constituent alpha = 0.005984 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Exceeds Limit: PC-5, PC-6, SMW-2

Prediction Limit

Interwell Non-parametric

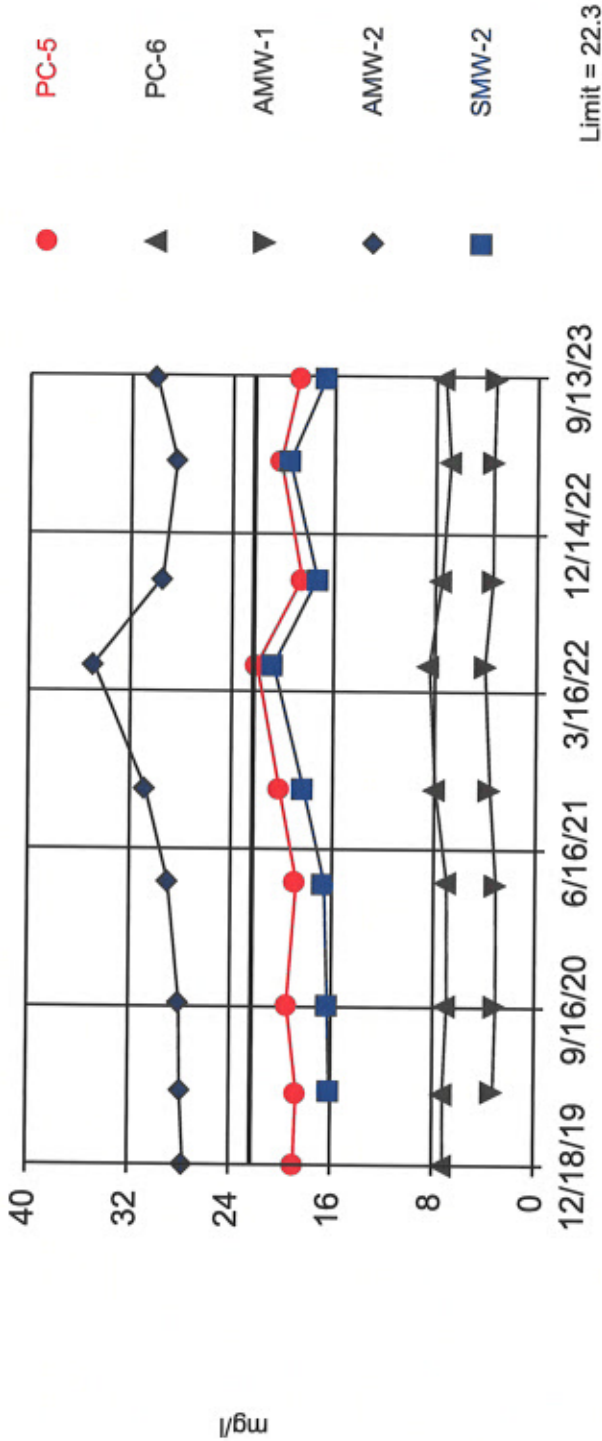


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 93.33% NDs. Annual per-constituent alpha = 0.00765. Individual comparison alpha = 0.007649 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Exceeds Limit: AMW-2

Prediction Limit

Interwell Non-parametric

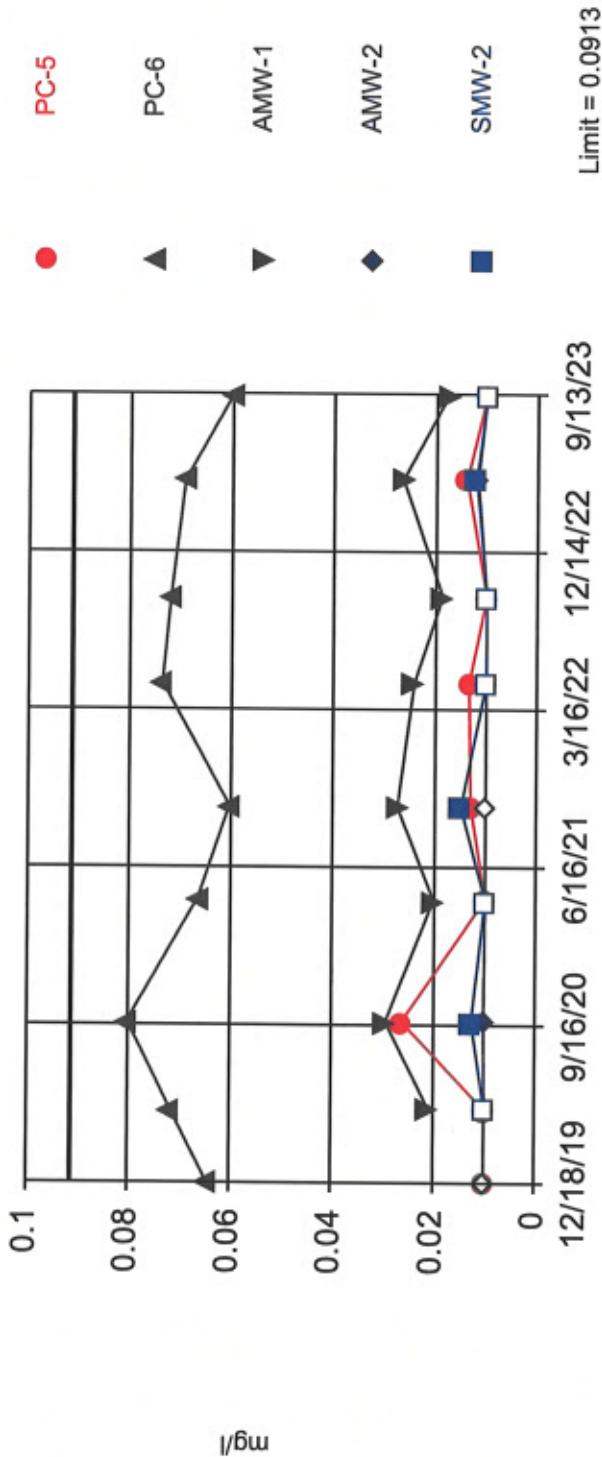


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 13 background values. Annual per-constituent alpha = 0.009877. Individual comparison alpha = 0.009876 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Within Limit

Prediction Limit

Interwell Non-parametric

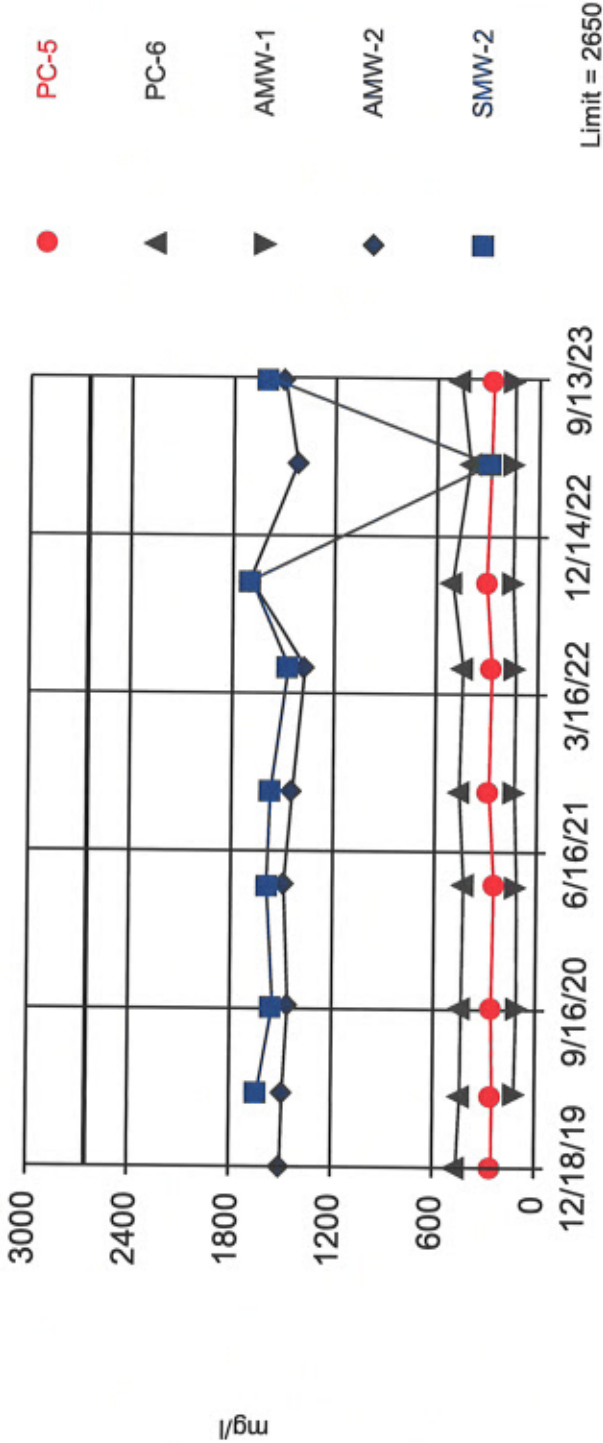


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 41.18% NDs. Annual per-constituent alpha = 0.005984 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

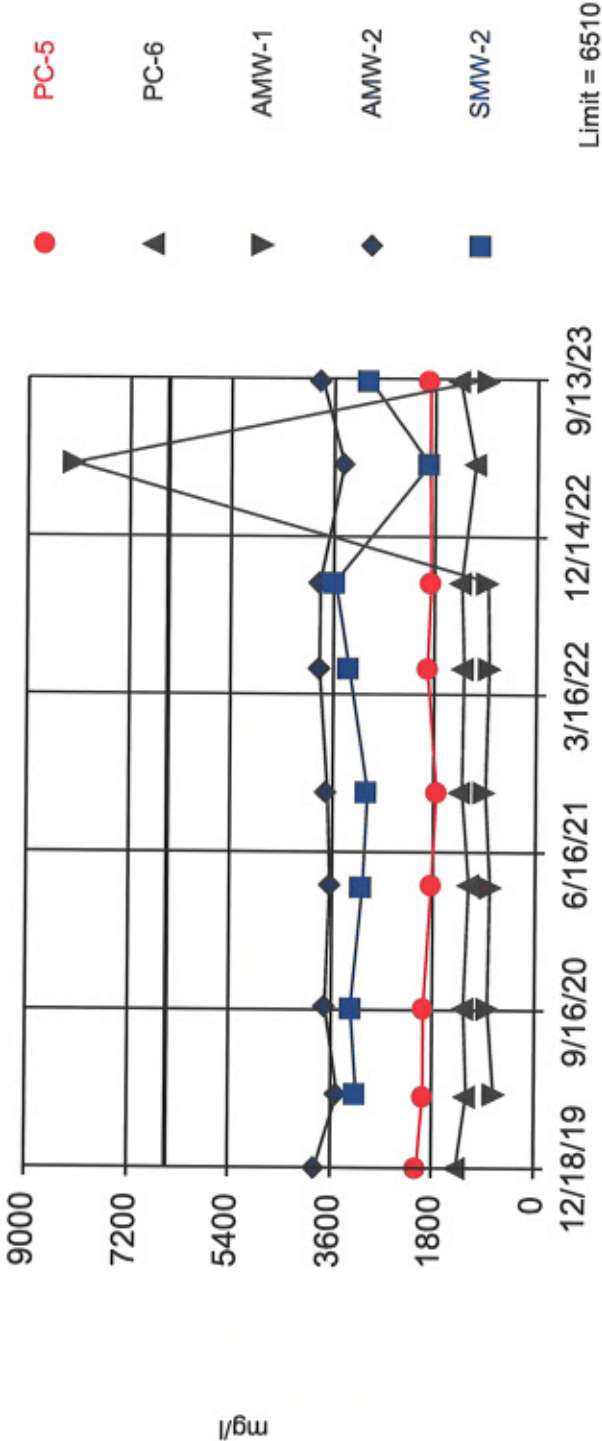
Constituent: Sodium Analysis Run 11/24/2023 1:18 PM

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Annual per-constituent alpha = 0.005433. Individual comparison alpha = 0.005432 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Sulfate Analysis Run 11/24/2023 1:18 PM

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023

Prediction Limit

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023 Printed 11/24/2023, 1:19 PM

Constituent	Well	Upper...	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Alkalinity, Bicarbonate (mg/l)	PC-5	956	277	9/13/2023	575	No	18	n/a	n/a	0	n/a	n/a	0.01086	NP Inter (normality) ...
Alkalinity, Bicarbonate (mg/l)	PC-6	956	277	9/13/2023	307	No	18	n/a	n/a	0	n/a	n/a	0.01086	NP Inter (normality) ...
Alkalinity, Bicarbonate (mg/l)	AMW-1	956	277	9/13/2023	199	Yes	18	n/a	n/a	0	n/a	n/a	0.01086	NP Inter (normality) ...
Alkalinity, Bicarbonate (mg/l)	AMW-2	956	277	9/13/2023	760	No	18	n/a	n/a	0	n/a	n/a	0.01086	NP Inter (normality) ...
Alkalinity, Bicarbonate (mg/l)	SMW-2	956	277	9/13/2023	981	Yes	18	n/a	n/a	0	n/a	n/a	0.01086	NP Inter (normality) ...
Alkalinity, Carbonate (mg/l)	PC-5	20	20	9/13/2023	20ND	No	18	n/a	n/a	100	n/a	n/a	0.01086	NP Inter (NDs) 1 of 2
Alkalinity, Carbonate (mg/l)	PC-6	20	20	9/13/2023	20ND	No	18	n/a	n/a	100	n/a	n/a	0.01086	NP Inter (NDs) 1 of 2
Alkalinity, Carbonate (mg/l)	AMW-1	20	20	9/13/2023	20ND	No	18	n/a	n/a	100	n/a	n/a	0.01086	NP Inter (NDs) 1 of 2
Alkalinity, Carbonate (mg/l)	AMW-2	20	20	9/13/2023	20ND	No	18	n/a	n/a	100	n/a	n/a	0.01086	NP Inter (NDs) 1 of 2
Alkalinity, Carbonate (mg/l)	SMW-2	20	20	9/13/2023	20ND	No	18	n/a	n/a	100	n/a	n/a	0.01086	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	PC-5	0.01	n/a	9/13/2023	0.01ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	PC-6	0.01	n/a	9/13/2023	0.01ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	AMW-1	0.01	n/a	9/13/2023	0.01ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	AMW-2	0.01	n/a	9/13/2023	0.01ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	SMW-2	0.01	n/a	9/13/2023	0.01ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Barium (mg/l)	PC-5	0.01634	n/a	9/13/2023	0.036	Yes	16	0.01414	0.001388	0	None	No	0.007498	Param Inter 1 of 2
Barium (mg/l)	PC-6	0.01634	n/a	9/13/2023	0.09668	No	16	0.01414	0.001388	0	None	No	0.007498	Param Inter 1 of 2
Barium (mg/l)	AMW-1	0.01634	n/a	9/13/2023	0.0275	Yes	16	0.01414	0.001388	0	None	No	0.007498	Param Inter 1 of 2
Barium (mg/l)	AMW-2	0.01634	n/a	9/13/2023	0.019	Yes	16	0.01414	0.001388	0	None	No	0.007498	Param Inter 1 of 2
Barium (mg/l)	SMW-2	0.01634	n/a	9/13/2023	0.0109	No	16	0.01414	0.001388	0	None	No	0.007498	Param Inter 1 of 2
Boron (mg/l)	PC-5	0.532	n/a	9/13/2023	0.2ND	No	17	n/a	n/a	0	n/a	n/a	0.005984	NP Inter (normality) ...
Boron (mg/l)	PC-6	0.532	n/a	9/13/2023	0.557	Yes	17	n/a	n/a	0	n/a	n/a	0.005984	NP Inter (normality) ...
Boron (mg/l)	AMW-1	0.532	n/a	9/13/2023	0.2ND	No	17	n/a	n/a	0	n/a	n/a	0.005984	NP Inter (normality) ...
Boron (mg/l)	AMW-2	0.532	n/a	9/13/2023	0.229	No	17	n/a	n/a	0	n/a	n/a	0.005984	NP Inter (normality) ...
Boron (mg/l)	SMW-2	0.532	n/a	9/13/2023	0.339	No	17	n/a	n/a	0	n/a	n/a	0.005984	NP Inter (normality) ...
Cadmium (mg/l)	PC-5	0.00219	n/a	9/13/2023	0.002ND	No	18	n/a	n/a	94.44	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	PC-6	0.00219	n/a	9/13/2023	0.002ND	No	18	n/a	n/a	94.44	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	AMW-1	0.00219	n/a	9/13/2023	0.002ND	No	18	n/a	n/a	94.44	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	AMW-2	0.00219	n/a	9/13/2023	0.002ND	No	18	n/a	n/a	94.44	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	SMW-2	0.00219	n/a	9/13/2023	0.002ND	No	18	n/a	n/a	94.44	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Calcium (mg/l)	PC-5	516.4	n/a	9/13/2023	585	Yes	17	474.1	27.04	0	None	No	0.007498	Param Inter 1 of 2
Calcium (mg/l)	PC-6	516.4	n/a	9/13/2023	176	No	17	474.1	27.04	0	None	No	0.007498	Param Inter 1 of 2
Calcium (mg/l)	AMW-1	516.4	n/a	9/13/2023	260	No	17	474.1	27.04	0	None	No	0.007498	Param Inter 1 of 2
Calcium (mg/l)	AMW-2	516.4	n/a	9/13/2023	462	No	17	474.1	27.04	0	None	No	0.007498	Param Inter 1 of 2
Calcium (mg/l)	SMW-2	516.4	n/a	9/13/2023	468	No	17	474.1	27.04	0	None	No	0.007498	Param Inter 1 of 2
Chloride (mg/l)	PC-5	943	n/a	9/13/2023	135	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Chloride (mg/l)	PC-6	943	n/a	9/13/2023	58.7	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Chloride (mg/l)	AMW-1	943	n/a	9/13/2023	32.2	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Chloride (mg/l)	AMW-2	943	n/a	9/13/2023	391	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Chloride (mg/l)	SMW-2	943	n/a	9/13/2023	795	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Flouride (mg/l)	PC-5	2.149	n/a	9/13/2023	3ND	No	18	1.026	0.723	27.78	Kapla...	No	0.007498	Param Inter 1 of 2
Flouride (mg/l)	PC-6	2.149	n/a	9/13/2023	3.59	Yes	18	1.026	0.723	27.78	Kapla...	No	0.007498	Param Inter 1 of 2
Flouride (mg/l)	AMW-1	2.149	n/a	9/13/2023	0.972	No	18	1.026	0.723	27.78	Kapla...	No	0.007498	Param Inter 1 of 2
Flouride (mg/l)	AMW-2	2.149	n/a	9/13/2023	3ND	No	18	1.026	0.723	27.78	Kapla...	No	0.007498	Param Inter 1 of 2
Flouride (mg/l)	SMW-2	2.149	n/a	9/13/2023	3ND	No	18	1.026	0.723	27.78	Kapla...	No	0.007498	Param Inter 1 of 2
Iron (mg/l)	PC-5	0.1	n/a	9/13/2023	0.1ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Iron (mg/l)	PC-6	0.1	n/a	9/13/2023	0.1ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Iron (mg/l)	AMW-1	0.1	n/a	9/13/2023	0.1ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Iron (mg/l)	AMW-2	0.1	n/a	9/13/2023	0.1ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Iron (mg/l)	SMW-2	0.1	n/a	9/13/2023	0.1ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2

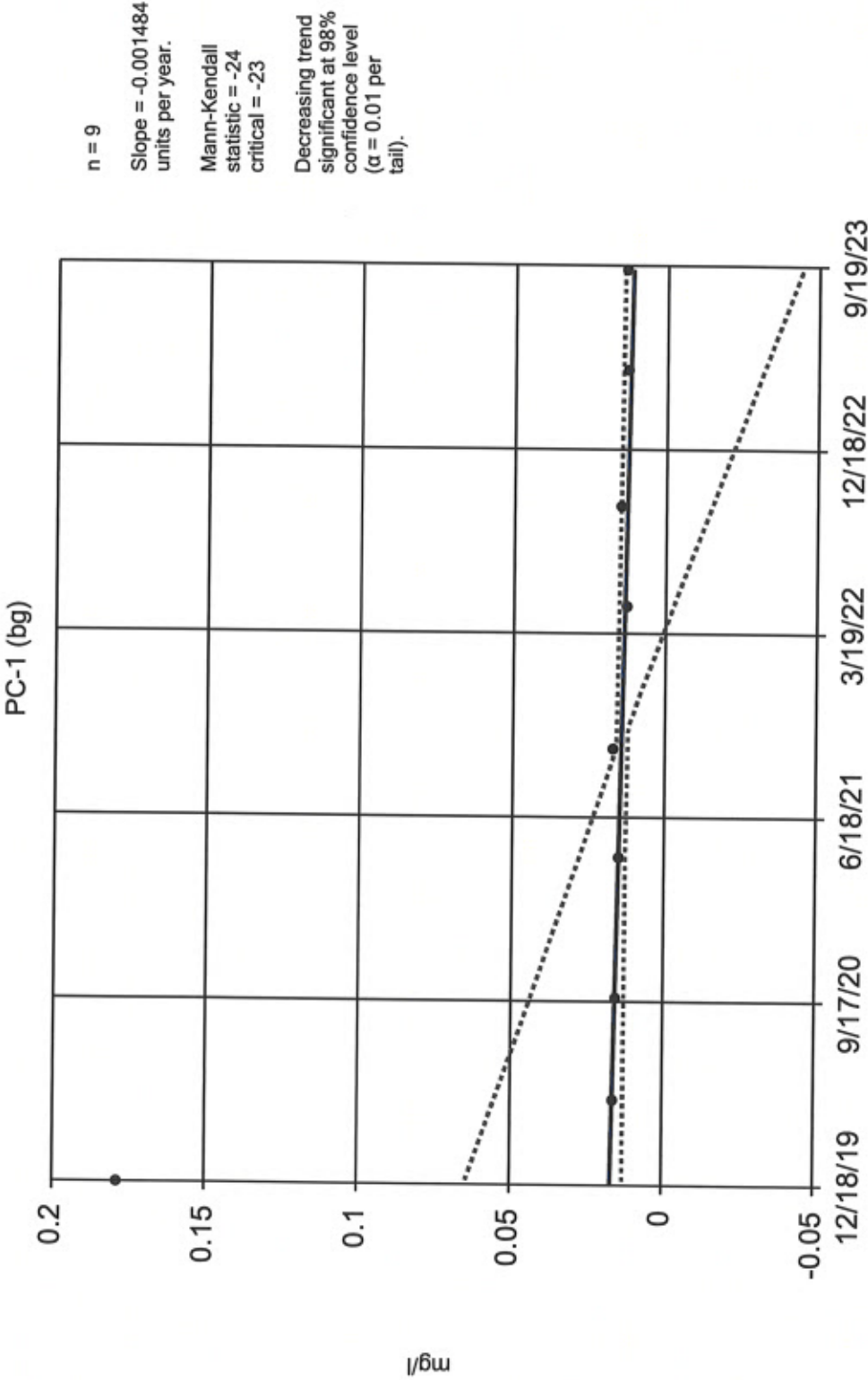
Prediction Limit

Lexington Area SWA Client: AEC Data: Inorganics Coors 3rd Qtr 2023 Printed 11/24/2023, 1:19 PM

Constituent	Well	Upper...	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/l)	PC-5	0.006	n/a	9/13/2023	0.006ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Lead (mg/l)	PC-6	0.006	n/a	9/13/2023	0.006ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Lead (mg/l)	AMW-1	0.006	n/a	9/13/2023	0.006ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Lead (mg/l)	AMW-2	0.006	n/a	9/13/2023	0.006ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Lead (mg/l)	SMW-2	0.006	n/a	9/13/2023	0.006ND	No	18	n/a	n/a	100	n/a	n/a	0.005432	NP Inter (NDs) 1 of 2
Magnesium (mg/l)	PC-5	377	n/a	9/13/2023	154	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Magnesium (mg/l)	PC-6	377	n/a	9/13/2023	81.1	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Magnesium (mg/l)	AMW-1	377	n/a	9/13/2023	70.1	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Magnesium (mg/l)	AMW-2	377	n/a	9/13/2023	178	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Magnesium (mg/l)	SMW-2	377	n/a	9/13/2023	166	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Manganese (mg/l)	PC-5	2.33	n/a	9/13/2023	18.5	Yes	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Manganese (mg/l)	PC-6	2.33	n/a	9/13/2023	0.0113	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Manganese (mg/l)	AMW-1	2.33	n/a	9/13/2023	0.01ND	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Manganese (mg/l)	AMW-2	2.33	n/a	9/13/2023	3.5	Yes	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Manganese (mg/l)	SMW-2	2.33	n/a	9/13/2023	0.482	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Molybdenum (mg/l)	PC-5	0.00512	n/a	9/13/2023	0.00582	Yes	15	n/a	n/a	93.33	n/a	n/a	0.007649	NP Inter (NDs) 1 of 2
Molybdenum (mg/l)	PC-6	0.00512	n/a	9/13/2023	0.00611	Yes	15	n/a	n/a	93.33	n/a	n/a	0.007649	NP Inter (NDs) 1 of 2
Molybdenum (mg/l)	AMW-1	0.00512	n/a	9/13/2023	0.005ND	No	15	n/a	n/a	93.33	n/a	n/a	0.007649	NP Inter (NDs) 1 of 2
Molybdenum (mg/l)	AMW-2	0.00512	n/a	9/13/2023	0.005ND	No	15	n/a	n/a	93.33	n/a	n/a	0.007649	NP Inter (NDs) 1 of 2
Molybdenum (mg/l)	SMW-2	0.00512	n/a	9/13/2023	0.00521	Yes	15	n/a	n/a	93.33	n/a	n/a	0.007649	NP Inter (NDs) 1 of 2
Potassium (mg/l)	PC-5	22.3	n/a	9/13/2023	18.7	No	13	n/a	n/a	0	n/a	n/a	0.009876	NP Inter (normality) ...
Potassium (mg/l)	PC-6	22.3	n/a	9/13/2023	7.29	No	13	n/a	n/a	0	n/a	n/a	0.009876	NP Inter (normality) ...
Potassium (mg/l)	AMW-1	22.3	n/a	9/13/2023	3.25	No	13	n/a	n/a	0	n/a	n/a	0.009876	NP Inter (normality) ...
Potassium (mg/l)	AMW-2	22.3	n/a	9/13/2023	30.1	Yes	13	n/a	n/a	0	n/a	n/a	0.009876	NP Inter (normality) ...
Potassium (mg/l)	SMW-2	22.3	n/a	9/13/2023	16.6	No	13	n/a	n/a	0	n/a	n/a	0.009876	NP Inter (normality) ...
Selenium (mg/l)	PC-5	0.0913	n/a	9/13/2023	0.01ND	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Selenium (mg/l)	PC-6	0.0913	n/a	9/13/2023	0.0598	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Selenium (mg/l)	AMW-1	0.0913	n/a	9/13/2023	0.0175	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Selenium (mg/l)	AMW-2	0.0913	n/a	9/13/2023	0.01ND	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Selenium (mg/l)	SMW-2	0.0913	n/a	9/13/2023	0.01ND	No	17	n/a	n/a	41.18	n/a	n/a	0.005984	NP Inter (normality) ...
Sodium (mg/l)	PC-5	2650	n/a	9/13/2023	269	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sodium (mg/l)	PC-6	2650	n/a	9/13/2023	462	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sodium (mg/l)	AMW-1	2650	n/a	9/13/2023	142	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sodium (mg/l)	AMW-2	2650	n/a	9/13/2023	1500	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sodium (mg/l)	SMW-2	2650	n/a	9/13/2023	1600	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sulfate (mg/l)	PC-5	6510	n/a	9/13/2023	1890	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sulfate (mg/l)	PC-6	6510	n/a	9/13/2023	1370	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sulfate (mg/l)	AMW-1	6510	n/a	9/13/2023	874	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sulfate (mg/l)	AMW-2	6510	n/a	9/13/2023	3820	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...
Sulfate (mg/l)	SMW-2	6510	n/a	9/13/2023	3000	No	18	n/a	n/a	0	n/a	n/a	0.005432	NP Inter (normality) ...

ATTACHMENT 4.3
BACKGROUND TREND CHARTS

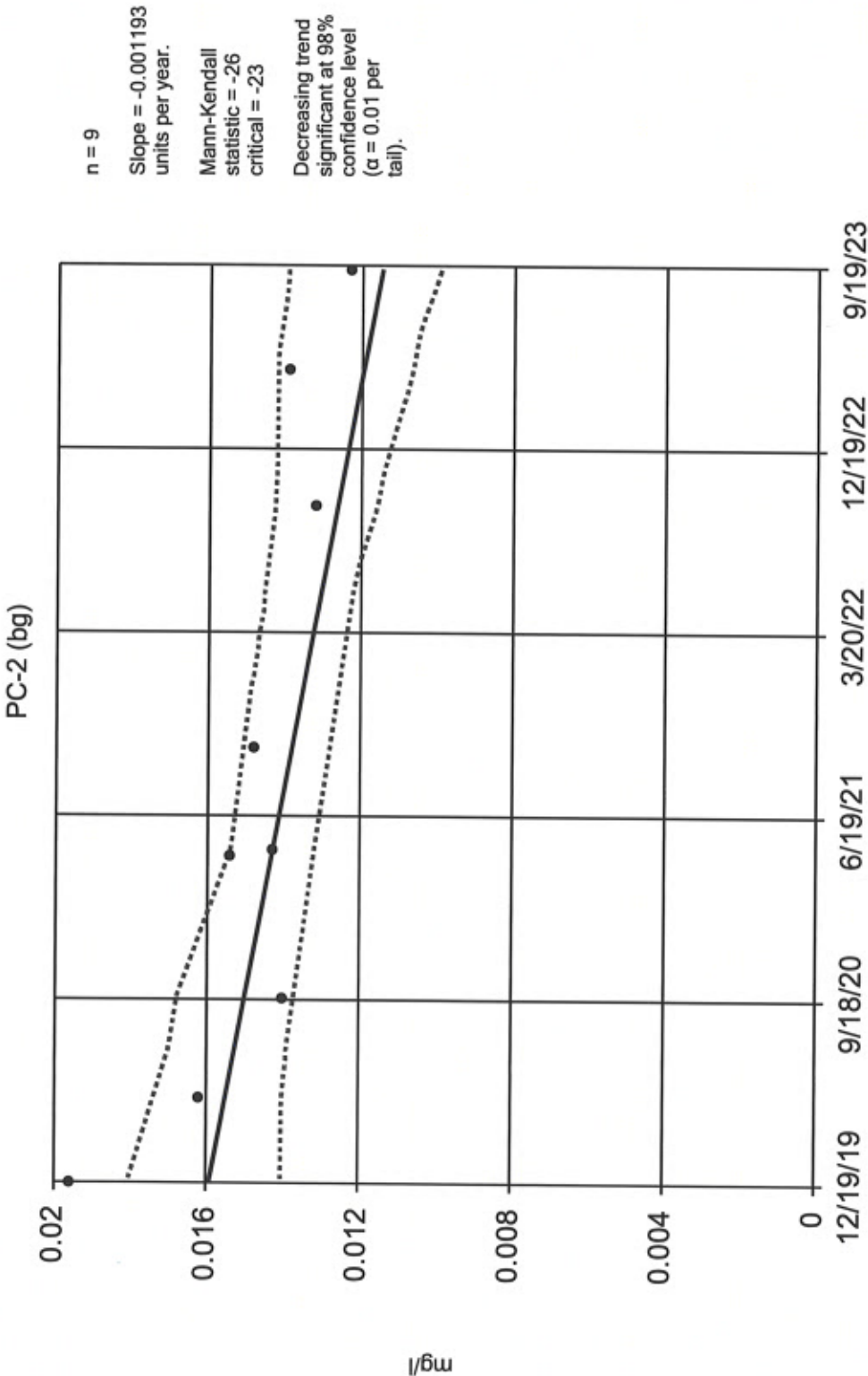
Sen's Slope and 95% Confidence Band



Constituent: Barium Analysis Run 11/22/2023 3:51 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

Sen's Slope and 95% Confidence Band



Constituent: Barium Analysis Run 11/22/2023 3:51 PM

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023

Trend Test

Front Range LF Client: American Environmental Consultants Data: Inorganics Coors 3rd Qtr 2023 Printed 11/22/2023, 3:52 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Alkalinity, Bicarbonate (mg/l)	PC-1 (bg)	-1.868	-9	-23	No	9	0	n/a	n/a	0.02	NP
Alkalinity, Bicarbonate (mg/l)	PC-2 (bg)	-6.798	-4	-23	No	9	0	n/a	n/a	0.02	NP
Alkalinity, Carbonate (mg/l)	PC-1 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Alkalinity, Carbonate (mg/l)	PC-2 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Arsenic (mg/l)	PC-1 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Arsenic (mg/l)	PC-2 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Barium (mg/l)	PC-1 (bg)	-0.001484	-24	-23	Yes	9	0	n/a	n/a	0.02	NP
Barium (mg/l)	PC-2 (bg)	-0.001193	-26	-23	Yes	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PC-1 (bg)	-0.002209	-10	-23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/l)	PC-2 (bg)	-0.000211	-2	-23	No	9	0	n/a	n/a	0.02	NP
Cadmium (mg/l)	PC-1 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Cadmium (mg/l)	PC-2 (bg)	0	-8	-23	No	9	88.89	n/a	n/a	0.02	NP
Calcium (mg/l)	PC-1 (bg)	-10.03	-12	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/l)	PC-2 (bg)	-8.107	-13	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PC-1 (bg)	-0.08944	-4	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/l)	PC-2 (bg)	8.942	8	23	No	9	0	n/a	n/a	0.02	NP
Flouride (mg/l)	PC-1 (bg)	0.02744	8	23	No	9	0	n/a	n/a	0.02	NP
Flouride (mg/l)	PC-2 (bg)	0.4682	23	23	No	9	55.56	n/a	n/a	0.02	NP
Iron (mg/l)	PC-1 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Iron (mg/l)	PC-2 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Lead (mg/l)	PC-1 (bg)	0	8	23	No	9	100	n/a	n/a	0.02	NP
Lead (mg/l)	PC-2 (bg)	0	8	23	No	9	100	n/a	n/a	0.02	NP
Magnesium (mg/l)	PC-1 (bg)	-1.034	-8	-23	No	9	0	n/a	n/a	0.02	NP
Magnesium (mg/l)	PC-2 (bg)	-5.893	-8	-23	No	9	0	n/a	n/a	0.02	NP
Manganese (mg/l)	PC-1 (bg)	0	-15	-23	No	9	77.78	n/a	n/a	0.02	NP
Manganese (mg/l)	PC-2 (bg)	-0.06683	-10	-23	No	9	0	n/a	n/a	0.02	NP
Molybdenum (mg/l)	PC-1 (bg)	0	0	20	No	8	100	n/a	n/a	0.02	NP
Molybdenum (mg/l)	PC-2 (bg)	0	1	20	No	8	75	n/a	n/a	0.02	NP
Potassium (mg/l)	PC-1 (bg)	0.02674	1	23	No	9	0	n/a	n/a	0.02	NP
Potassium (mg/l)	PC-2 (bg)	-0.2064	-7	-23	No	9	0	n/a	n/a	0.02	NP
Selenium (mg/l)	PC-1 (bg)	-0.0003873	-3	-23	No	9	0	n/a	n/a	0.02	NP
Selenium (mg/l)	PC-2 (bg)	0	-1	-23	No	9	77.78	n/a	n/a	0.02	NP
Sodium (mg/l)	PC-1 (bg)	-3.108	-4	-23	No	9	0	n/a	n/a	0.02	NP
Sodium (mg/l)	PC-2 (bg)	-57.3	-12	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PC-1 (bg)	1.948	1	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/l)	PC-2 (bg)	-155.3	-10	-23	No	9	0	n/a	n/a	0.02	NP

SURFACE WATER HYDROLOGY

2023

SURFACE WATER HYDROLOGY

The site drainage plan and descriptions of associated structures for the CEC Keenesburg Mine site are found in Appendix K of the Permit. Historically, as part of the reclamation process, CEC continues to maintain the diversion ditches, drainage ditches and drainage swales along the roads and around the north and east sides of the Permit Area. These features serve to convey all surface water runoff to Sediment Pond 2. The present drainage facilities, as well as existing site topographic features, are identified on the Existing Surface Features and Utilities Map. Certain surface water control features have been designated permanent facilities (by Permit revision, and at the direction of CDMG and others). These features will remain following the completion of all site reclamation activities. The permanent features include:

- Sediment Pond #2,
- The East and the West Perimeter Ditches
- The Dugout Pond

These permanent drainage features are identified on the existing Reclamation Contour and Drainage Plan Map.

With the exception of Sediment Pond 2 and the Dugout Pond, all previously existing man-made temporary pond sites have been closed and deleted from the drainage control mapping and monitoring requirement. This action was deemed appropriate because: 1) the sedimentation infill of Sediment Pond 2 has been virtually non-existent after more than fifteen years of continuous use; 2) Sediment Pond 2 has not had significant amounts of water stored in it for more than brief periods (except during the unusual and prolonged periods of excess precipitation in 1995, 1999, 2013, and 2018), and 3) even considering those unusual events of 1995, 1999, 2013, and 2018, to date there has not been an observed discharge from Sediment Pond 2. The rain event of 2018 took right up to the spillway, but significant outflow was not observed based on natural debris at the spillway.

Further, CEC implemented a dewatering scheme for Sediment Pond 2 in 1997, in conjunction with the preparation of a, "Spill Prevention, Control and Countermeasures Plan" for the site. This plan was last updated in 2003, but has been the subject of annual review. According to the plan, and when conditions warrant, CEC personnel will pump excess runoff water accumulated in Sediment Pond 2 back to the Dugout Pond, located about 700 feet slightly upgradient and to the south-southeast on the CEC property. The Dugout Pond has an available storage capacity exceeding the total contributing runoff volume associated with a 100-year,

24-hour design storm event (Technical Revision, "Drainage Control Plan II", January 1995). Pumps can be employed, as needed, to move the accumulated runoff water in Sediment Pond 2 back to the Dugout Pond within a maximum time frame of 72 hours, thus meeting a reasonable evacuation time period for Sediment Pond 2 dewatering. In this manner, CEC can maintain a continued lowered pond level in Sediment Pond 2 during prolonged periods of excess rainfall and runoff at the site (similar to that which was experienced during the spring of 1995). CEC did have occasion to employ this plan during rainfall events in April and May, 1999. This plan was also deployed in May and June of 2018 successfully. The system functioned in accordance with the design.

Except for the surface water accumulation from "recent" rainfall events, the practice of encouraging standing water to "pond" in the former mining pits (now confined to ash disposal B-Pit) has been eliminated. Deep eolian sand deposits (in some places as much as thirty feet in thickness) exist across much of the mine site. The sand's high infiltration characteristic contributes to a significant loss of surface moisture due to the "deep percolation" of rainfall during most storm events. The result is that normally only a minimal runoff is experienced. As additional segments of the Permit site are reclaimed (topsanded and seeded), less and less runoff has been observed.

DISPOSAL ACTIVITIES DATA 2023

DISPOSAL ACTIVITIES

Ash Disposal

For the calendar year 2023, no mixed fly and bottom ash were transported to, and disposed of at the Coors Energy Company, Keenesburg Mine site. Thus, the total ash disposal activity for the B-Pit ash volume remains at 816,024 tons. The total amount of ash disposed of at the Keenesburg Mine between 1987 and the end of ash disposal was 1,066,044 tons. The last load of ash was disposed of in March 2016. No further ash will be accepted.

In accordance with the conditions of the Permit, the Keenesburg site continued to accept only ash that is the by-product of the coal combustion process, and which is generated at the power plant located in Golden, Colorado, the MillerCoors, LLC (formerly Coors Brewing Company) plant location. Since September, 1995 this power plant has been owned and operated by Colorado-Golden Energy Corporation (CGEC). (formerly Trigen-Colorado Energy Corporation). According to the agreements between CGEC and CEC, ash from this power plant will continue to be transported to, and used for reclamation at the Keenesburg site until the reclamation requirement has been satisfied. As of March 2016, coal is no longer used at the power plant, as such no more ash will be deposited into the Keenesburg mine.

Mine Waste Rock Disposal

CEC obtained approvals from CDRMS (Minor Revision #34), from CDPHE, and from Weld County, to dispose of mine waste rock at the Keenesburg Mine site. During 1998 and 1999 a total of 12,467 tons of mine waste rock, the residual material from "hard rock" mine reclamation sites in the Clear Creek drainage, near Idaho Springs, Colorado, was transported to the Keenesburg site for disposal. This material was placed, in a layer approximately four feet thick, between layers of ash in the existing disposal pit (B-Pit). The specific intent of this method of mine waste rock disposal, as described in MR #34, was to isolate the material and thus minimize the possibility for future contamination.

No additional mine waste rock was received for disposal after calendar year 1999. The total quantity of this material placed at the Keenesburg site is still

12,467 tons. The placement location and horizontal extent of the mine waste rock has been identified on the Existing Surface Features and Utilities Map.

The site has been fully reclaimed, no further ash or rocks will be accepted or placed at the mine. All areas have been graded to final elevations and seeded.

RECLAMATION REPORT 2023

RECLAMATION REPORT

Coors Energy Company (CEC) continues to contract for the consultant engineering services of American Environmental Consulting, LLC, Littleton, Colorado (includes preparation of computer-generated drawings of the mine site, and compilation of volume and area estimates). In 2012, AzTec Consultants, Inc. provided surveying services for the new control points located for subsequent mapping work. No topo was taken in 2023 as the site remains unchanged.

Note: To facilitate easier reference to, and discussion of the various acreage parcels shown on the Vegetation/Revegetation Map (see page 218) a numeric designation has been assigned to each revegetated parcel. This system, initiated for the 2002 AHR Report, has been carried forward with new designations assigned as parcels were first seeded with the reclamation seed mix. Reclamation sitework is now complete.

No additional acreage was "disturbed" during 2023. In fact, the mine closure activities were completed in 2020 and the mine is in post-closure monitoring. As such, no aerial photo was taken in 2023.

There was minor reseeding completed in 2023 to accommodate ground rework and organic material placement on the historic road alignments. These areas were reworked in 2023 due to substandard growth from previous work. More details are included in the vegetation report.

Because of the national debate over classification of ash (hazardous vs nonhazardous), a management decision was made in 2010 to fill in as much of the bottom layer of B-Pit as soon as possible. The ash is normally placed in the pit in two layers, or lifts, before it is covered with spoils (6 feet) and topsand (2 feet). Additionally, management determined that a change from coal fuel to natural gas is economically sound and April 22, 2016 saw the last load of ash disposed of in the facility. The remaining fill into the B-Pit was completed using overburden materials from the onsite soils excavated during previous mining operations.

CEC will also use this opportunity to note that control efforts are being employed, specifically with respect to *Bromus tectorum* (cheatgrass). This

particular noxious weed (Classification list "C" species on the State's noxious weed listing), has been the subject of discussions following more recent AHR Report submittals, and most recently the Application for Phase III bond release (SL-06). In response to concerns over this issue, CEC has followed the recommendation of CDRMS and others in pursuing a test application of a control herbicide [Panoramic 2SL, manufactured by Alligare]. The test application was first made during the fall of 2010, specifically to Area 25. Then, following evidence of a successful control effort, the herbicide was applied to areas with noxious weeds.

In 2016, a technical revision to the permit was submitted and included removing approximately 212.45 acres from the mine permit. The reclamation summary for the end of 2021 is unchanged from 2016 and is as follows:

RECLAMATION ACREAGE SUMMARY

Total area remaining to be reclaimed 0 acres

Total area reclaimed and revegetated 225.10 ± acres

Grand Total 225.10 ± acres

[Note: It is still important to recognize that these acreage values vary significantly from the 2005 and earlier AHR Reports. These variances result from the improved accuracy of the photo mapping tools, and a redetermination of total site acreage following the assignment of acreage values to all parcels within the Permit area boundary. The results of this effort were submitted and approved as part of the Permit Renewal Application process in 2006. The most significant change was in the number of acres left "undisturbed" by mining activities, yet still within the Permit Area (a total of 173± acres before TR #42). Additionally, while the Permit Area boundary was changed (adjusted inward) in 2011 by TR #42, this Reclamation Acreage Summary accounts for all acreage reclaimed, whether now inside or outside of the boundary line.]

Additional Reclamation Information:

The total 435± acres "originally disturbed" by the Keenesburg Mine coal extraction operation can presently be assigned to one or more of the following categories:

- Acreage in previously active mining areas that has been reclaimed (includes the Long Term Spoil Area)
- Acreage backfilled and graded that has been previously seeded and growing

- Acreage designated as long-term mining or reclamation facilities (includes Access Road and SAE's)
- Acreage removed from Permit Area through approval of TR #42

The ARR form for 2023 had the following modifications:

- Acres Seeded, 9 years or less was changed to 129.69 acres. This was the value determined in 2021. The change in the 2022 form, a reduction of 3.65 acres was due to a misunderstanding of how the results were to be reported.
- Acres Seeded, 10 years or greater was changed to 233.59 acres. This was the value determined in 2021. The change in the 2022 form, a reduction of 170.98 acres was due to a misunderstanding of how the results were to be reported and this value was removed when an area had Phase 3 release.
- Bond Release, Phase 2 was increased by 29.84 acres. This was due to a phase change in 2020 but was inadvertently not included in 2021 and 2022 ARR forms.

Colorado Division of Reclamation, Mining and Safety

Annual Reclamation Report for Calendar Year – 2023

Kennesburg Mine	C-1981-028	Coors Energy Company
Mine Name	Permit Number	Permittee
PO Box 4030 Golden, CO 80402		
Address		

This report, required by Rule 2.04.13, is due by February 15 of each year, or other date, as agreed upon by the Division. It should include text, discussion, and maps, at a minimum, in addition to any other reclamation monitoring data as required by the approved permit. The location of the acreage reported under each land status category and year of seeding (if applicable) should be clearly identified on a map included with the report.

Land Category	Last Year's Cumulative Total (from last year's ARR)	This Calendar Year			Cumulative Total
		Acres Added (+)	Acres Subtracted (-)		
Acreage in Active Mining Areas ¹	0	0	0	=	0.00

Land Category	Last Year's Cumulative Total (from last year's ARR)	This Calendar Year			Cumulative Total
		Acres Added (+)	Acres Subtracted (-)		
Acres Disturbed ²	443.53	0	0	=	443.53
Acres Backfilled and Graded	373.16	0	0	=	373.16
Acres Topsoiled	373.16	0	0	=	373.16

Acreage in Long-term Facilities ³	Last Year's Cumulative Total (from last year's ARR)	This Calendar Year			Cumulative Total
		Acres Added (+)	Acres Subtracted (-)		
Non-Permanent Facilities	0	0	0	=	0
Permanent Facilities (permitted)	70.37	0	0	=	70.37
Totals	70.37			=	70.37

Acres Seeded (permanent)	Last Year's Cumulative Total (from last year's ARR)	This Calendar Year			Cumulative Total
		Acres Added (+)	Acres Subtracted (-)		
9 Years and Less	129.68	0	0	=	129.68
10 Years and Greater	233.59	0	0	=	233.59
Totals	363.27			=	363.27

Bond Release	Last Year's Cumulative Total (from last year's ARR)	This Calendar Year			Cumulative Total
		Acres Added (+)	Acres Subtracted (-)		
Phase I Released	333.36	101.28	0	=	434.64
Phase II Released	301.91	0	0	=	301.91
Phase III Released	263.70	0	0	=	263.70

¹Includes pits, topsoil stripped areas in advance of pits, and spoil not backfilled and graded

²Surface Mine Acres Disturbed = B&G + Long-Term Facilities + Active Mining Areas; Underground Mine Acres Disturbed = B&G + Long-Term Facilities; Separately-permitted Loadouts = B&G + Long-Term Facilities

³Includes haul, access and light-use roads, temporary dams and impoundments; permanent dams and impoundments; diversion and collector ditches, water and air monitoring sites; topsoil stockpiles; overburden stockpiles; repair, storage and construction areas; office area, repair shops, and parking; coal stockpiles, loading, and processing areas; railroads; coal conveyors; refuse piles and coal mine waste impoundments; head-of-hollow fills; valley fills; ventilation shafts and entryways; and non-coal waste disposal area (garbage dumps and coal combustion by-products disposal areas).

MASS BALANCE

CEC stopped accepting fly and bottom ash for disposal following 2016 and no ash was disposed of in 2023. Reclamation work has been completed. All overburden material from the Long-Term Spoil Area was previously used as fill for the remaining portion of the B-Pit, and as the 6-foot final cover over the top layer of ash in the filled area of the B Pit. No additional overburden was placed after 2022. The 2019 to 2020 topo shows that there is no remaining topsand to be removed and placed for reclamation. No mine waste rock was delivered to the Keenesburg site for disposal during the year. In 2020, the reclamation activities included the final placement of topsand material, seeding approximately 55.55 acres (Areas 43, 38, 35, and 36), and continuing to maintain the quality of the revegetation. Some minor site work was completed in 2023, including tilling the old road alignments and adding in some organic material to aid in vegetation growth.

Remaining B-Pit Airspace Volume 0 BCY (final reclamation contours achieved)

Remaining A-Pit Airspace Volume 0 BCY (final reclamation contours achieved)

[A-PIT AND B-PIT ARE CLOSED]

Long-Term Spoil Remaining on Site 0 BCY

Topsand Stockpiled on Site 0 BCY

Review of 2003 versus 2008 Topographic Surfaces

Since reliability of the topographic map work is essential to most activities relative to reclamation, it is important to build reliability into this database. In 2003 through 2005, CEC had the site flown and contoured at 2-foot intervals in the disturbed “active reclamation” areas, as opposed to the 5-foot interval used prior to 2003. For 2006 and after, the entire site has been

flown and contoured at the 2-foot interval. This more detailed topographic mapping has resulted in consecutive years of more accurate elevation mapping and better estimates of the volumes of materials used and their placement. CEC has concluded that the expanded 2-foot contour interval mapping for the entire site is a long-term benefit worth the additional investment.

Review of 2011, 2012, and 2013 Topographic Surfaces

In 2012, CEC had the site resurveyed and new control points added for future mapping and volume calculations. The new survey also moved the coordinate system to State Plane coordinates from the previously used local coordinates, however the volumes for 2012 were still calculated based on the local grid system. In 2013, and in subsequent mapping events, the state plane coordinate system alone was used to prepare the surfaces and calculate

volumes to ensure mapping activities into the future more accurately estimate the volumes of materials used and their placement and more accurate comparisons for future activities. This change from local to state plane coordinate system resulted in a change in elevation across the site which also results in a recalculated volume of materials. The following note has been added to each drawing to explain the change:

The October 2012 Aerial survey of Keenesburg Mine was compiled and triangulated on Colorado State Plane North (surface) and reprojected to Local Mine datum using follow report:

Horizontal Reprojection to Local Mine Datum:

Translation north: -1282156.5640 ft

Translation east: -3240307.3930 ft

Rotation: 0°01'39.45"

Origin north: 1318616.5640 ft

Origin east: 3280875.3930 ft

Scale factor: 1.00148829949

Vertical Reprojection to Local Mine Datum:

Note: there is a vertical plane between the New Vertical Datum and Local Mine Datum.

The following points were best fit to match Local Mine Datum.

X 36620.749 Y 28971.406 -3.834 ft at power pole

X 36498.977 Y 36412.435 -0.25 ft at control point 1101

X 40568.000 Y 36460.000 1.273 at control point 1103

X 41733.435 Y 28217.937 -1.834 ft at power pole

In 2013, and in subsequent mapping events, the flyover was mapped in state plane coordinates to match the 2012 change. Additionally, the volume calculations were conducted using Carlson software, arguably more accurate software than the previously used AutoCAD Land Development software (see note below). The two changes together result in a more accurate assessment of the remaining airspace for filling and soils available for use as cover during reclamation.

Computer-Aided Drafting System Software Explanation

As noted above, the volumes for the 2020 AHR Report were computed using the Triangulation by Two Surface Volumes method provided in the Carlson Software programs rather than the previously used AutoCAD Land Development Desktop software. Carlson software, arguably, results in more accurate volume calculations. These methods calculate faster in most cases than other methods and are the most accurate because it uses true TIN to TIN prismatic volumes. The Triangulation method re-triangulates a new surface based on the points from both surfaces (TIN). It uses the points from both surfaces (TIN), as well as any location where the triangle edges between the two surfaces cross. The Triangulation method then calculates the new surface elevations based on the difference between the elevations of the two surfaces.

PERMIT ACTIVITY SUMMARY FOR 2023

<u>Minor Revisions</u>	<u>Approved</u>	<u>Description of Revision</u>
NA		

<u>Technical Revisions</u>	<u>Approved</u>	<u>Description</u>
NA		

<u>"Other"</u>	<u>Approved</u>	<u>Description</u>
NA		