

Laboratory Data



AIRTECH
*Environmental
Services Inc.*

Gravimetric Analytical Report

Performed for
**Big Rivers
Coleman Station**
*Project No. 3648
August 8, 2011*

Analyst: _____


James Christ

The following data has been reviewed for completeness, accuracy, adherence to method protocol and compliance with quality assurance guidelines.

Reviewer: _____

Date: _____

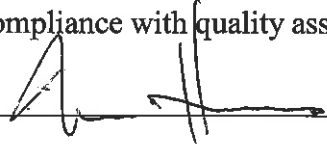

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Project Summary

General

Project Information	
Date Received	July 7, 2011
Analytical Protocol	EPA Methods 5B/202
Number of Samples Received	36
Number of Blanks Received	3

Analytical Equipment

Equipment Information	Manufacturer	Model	Serial No.
Analytical Balance	Ohaus	AV114C	8028031056

Sample Remarks

All samples were analyzed according to the EPA Method 5 Section 4 and EPA Method 202 Section 11. A summary of the analytical results is presented in Table 1.

QA/QC

All sample weights were taken until two consecutive weights were within 0.0005g. The Ohaus balance was calibrated daily in addition to the yearly full scale calibration that was performed by Automated Scale Corporation on April 12, 2011.

Condition of Samples When Received

Samples were received in good condition.

Table 1. Summary of EPA Methods 5B/202 Results

Common Stack			
	Run 1	Run 2	Run 3
Filterable PM			
Front-Half Particulate (g)	0.0641	0.0153	0.0139
Condensable Particulate			
Condensable Particulate (g)	0.0167	0.0327	0.0252
Total Particulate			
Total Particulate (g)	0.0808	0.0480	0.0391
ESP 1 Outlet			
Filterable PM			
Front-Half Particulate (g)	0.4854	0.3144	0.2909
Condensable Particulate			
Condensable Particulate (g)	0.0379	0.0788	0.0501
Total Particulate			
Total Particulate (g)	0.5234	0.3932	0.3411
ESP 2 Outlet			
Filterable PM			
Front-Half Particulate (g)	0.2378	0.3962	0.3807
Condensable Particulate			
Condensable Particulate (g)	0.0648	0.0277	0.0604
Total Particulate			
Total Particulate (g)	0.3026	0.4238	0.4412

Table 1. Summary of EPA Methods 5B/202 Results continue

ESP 3 Outlet			
Filterable PM	Run 1	Run 2	Run 3
Front-Half Particulate (g)	0.2874	0.2642	0.2415
Condensible Particulate	Run 1	Run 2	Run 3
Condensible Particulate (g)	0.0966	0.0182	0.0201
Total Particulate	Run 1	Run 2	Run 3
Total Particulate (g)	0.3840	0.2823	0.2616

Appendix

Includes the following:

- *Data Entry*
- *Raw Data*
- *Calibration Logs*

Appendix

Includes the following:

- *Data Entry*
- *Raw Data*
- *Calibration Logs*

Data Entry

Includes the following:

- *Filter Data Entry*
- *Front-Half-Rinse Data Entry*
- *Organic Fraction Data Entry*
- *Inorganic Fraction Data Entry*

Method 5B/202 Parameters		Run 1	Run 2	Run 3	Blank
<u>Filter</u>		12136	12128	12129	
Filter tare weight (g)	Trial 1	0.3540	0.3403	0.3536	
	Trial 2	0.3543	0.3405	0.3533	
	Average	0.3542	0.3404	0.3535	
Filter final weight (g)	Trial 1	0.7073	0.5841	0.5499	
	Trial 2	0.7071	0.5837	0.5494	
	Average	0.7072	0.5839	0.5497	
Filter net weight, m_f (g)		0.3531	0.2435	0.1962	
<u>PM_{2.5} Front Half Wash</u>	<i>Beaker ID</i>	19	129	153	X6
Beaker tare weight (g)	Trial 1	36.7938	84.1709	83.1576	3.6040
	Trial 2	36.7939	84.1707	83.1575	3.6039
	Average	36.7939	84.1708	83.1576	3.6040
Beaker final weight (g)	Trial 1	36.9260	84.2415	83.2521	3.6038
	Trial 2	36.9265	84.2419	83.2525	3.6036
	Average	36.9263	84.2417	83.2523	3.6037
Volume of Wash, V_{aw} (ml)		120	180	100	200
Beaker net weight, m_a (g)		0.1324	0.0709	0.0947	0.0000
<u>Organic Fraction</u>					
	<i>Weighing tin ID</i>	Z2	Z6	B2	X5
Weighing tin tare weight (g)	Trial 1	3.5409	3.5279	3.4142	3.5545
	Trial 2	3.5414	3.5282	3.4143	3.5546
	Average	3.5412	3.5281	3.4143	3.5546
Weighing tin final weight (g)	Trial 1	3.5564	3.5398	3.4328	3.5543
	Trial 2	3.5563	3.5402	3.4329	3.5542
	Average	3.5564	3.5400	3.4329	3.5543
Volume of Wash, V_{aw} (ml)		400	375	360	200
Weighing tin net weight, m_a (g)		0.0152	0.0120	0.0186	0.0000
<u>Inorganic Fraction</u>					
	<i>Weighing tin ID</i>	159	207	208	421
Weighing tin tare weight (g)	Trial 1	83.0863	94.5686	94.4540	106.1451
	Trial 2	83.0865	94.5689	94.4544	106.1449
	Average	83.0864	94.5688	94.4542	106.1450
Weighing tin final weight (g)	Trial 1	83.1104	94.6366	94.4869	106.1460
	Trial 2	83.1102	94.6370	94.4869	106.1464
	Average	83.1103	94.6368	94.4869	106.1462
Volume of Wash, V_{aw} (ml)		360	350	375	200
Weighing tin net weight, m_a (g)		0.0239	0.0680	0.0327	0.0012

Method 5B/202 Parameters		Run 1	Run 2	Run 3	Blank
<u>Filter</u>		12138	12134	12135	
Filter tare weight (g)	Trial 1	0.3548	0.3517	0.3513	
	Trial 2	0.3549	0.3515	0.3514	
	Average	0.3549	0.3516	0.3514	
Filter final weight (g)	Trial 1	0.5085	0.6294	0.6019	
	Trial 2	0.5087	0.6296	0.6014	
	Average	0.5086	0.6295	0.6017	
Filter net weight, m_f (g)		0.1538	0.2779	0.2503	
<u>PM_{2.5} Front Half Wash</u>	<i>Beaker ID</i>	31	52	60	X6
Beaker tare weight (g)	Trial 1	36.3947	103.7167	104.5531	3.6040
	Trial 2	36.3952	103.7166	104.5531	3.6039
	Average	36.3950	103.7167	104.5531	3.6040
Beaker final weight (g)	Trial 1	36.4789	103.8350	104.6833	3.6038
	Trial 2	36.4792	103.8348	104.6838	3.6036
	Average	36.4791	103.8349	104.6836	3.6037
Volume of Wash, V_{aw} (ml)		125	125	100	200
Beaker net weight, m_a (g)		0.0841	0.1183	0.1304	0.0000
<u>Organic Fraction</u>					
	<i>Weighing tin ID</i>	Z3	Z7	B3	X5
Weighing tin tare weight (g)	Trial 1	3.5383	3.4976	3.4852	3.5545
	Trial 2	3.5383	3.4978	3.4849	3.5546
	Average	3.5383	3.4977	3.4851	3.5546
Weighing tin final weight (g)	Trial 1	3.5484	3.5049	3.5036	3.5543
	Trial 2	3.5480	3.5049	3.5039	3.5542
	Average	3.5482	3.5049	3.5038	3.5543
Volume of Wash, V_{aw} (ml)		410	375	380	200
Weighing tin net weight, m_a (g)		0.0099	0.0072	0.0187	0.0000
<u>Inorganic Fraction</u>					
	<i>Weighing tin ID</i>	47	301	118	421
Weighing tin tare weight (g)	Trial 1	97.5671	85.0009	86.2313	106.1451
	Trial 2	97.5672	85.0012	86.2318	106.1449
	Average	97.5672	85.0011	86.2316	106.1450
Weighing tin final weight (g)	Trial 1	97.6234	85.0226	86.2742	106.1460
	Trial 2	97.6230	85.0228	86.2747	106.1464
	Average	97.6232	85.0227	86.2745	106.1462
Volume of Wash, V_{aw} (ml)		335	350	375	200
Weighing tin net weight, m_a (g)		0.0560	0.0217	0.0429	0.0012

Method 5B/202 Parameters		Run 1	Run 2	Run 3	Blank
<u>Filter</u>		12139	12132	12133	
Filter tare weight (g)	Trial 1	0.3531	0.3587	0.3558	
	Trial 2	0.3536	0.3588	0.3558	
	Average	0.3534	0.3588	0.3558	
Filter final weight (g)	Trial 1	0.5844	0.5974	0.5457	
	Trial 2	0.5847	0.5979	0.5452	
	Average	0.5846	0.5977	0.5455	
Filter net weight, m_f (g)		0.2312	0.2389	0.1897	
<u>PM_{2.5} Front Half Wash</u>	<i>Beaker ID</i>	10	71	307	X6
Beaker tare weight (g)	Trial 1	34.7663	102.5675	83.4544	3.6040
	Trial 2	34.7664	102.5674	83.4546	3.6039
	Average	34.7664	102.5675	83.4545	3.6040
Beaker final weight (g)	Trial 1	34.8225	102.5928	83.5064	3.6038
	Trial 2	34.8226	102.5927	83.5062	3.6036
	Average	34.8226	102.5928	83.5063	3.6037
Volume of Wash, V_{aw} (ml)		135	100	100	200
Beaker net weight, m_a (g)		0.0562	0.0253	0.0518	0.0000
<u>Organic Fraction</u>					
	<i>Weighing tin ID</i>	Z4	Z8	B4	X5
Weighing tin tare weight (g)	Trial 1	3.5866	3.5070	3.6086	3.5545
	Trial 2	3.5866	3.5075	3.6084	3.5546
	Average	3.5866	3.5073	3.6085	3.5546
Weighing tin final weight (g)	Trial 1	3.5935	3.5121	3.6182	3.5543
	Trial 2	3.5930	3.5123	3.6187	3.5542
	Average	3.5933	3.5122	3.6185	3.5543
Volume of Wash, V_{aw} (ml)		415	350	380	200
Weighing tin net weight, m_a (g)		0.0067	0.0050	0.0099	0.0000
<u>Inorganic Fraction</u>					
	<i>Weighing tin ID</i>	201	404	114	421
Weighing tin tare weight (g)	Trial 1	85.4473	101.2248	86.0869	106.1451
	Trial 2	85.4475	101.2247	86.0865	106.1449
	Average	85.4474	101.2248	86.0867	106.1450
Weighing tin final weight (g)	Trial 1	85.5388	101.2394	86.0982	106.1460
	Trial 2	85.5383	101.2389	86.0979	106.1464
	Average	85.5386	101.2392	86.0981	106.1462
Volume of Wash, V_{aw} (ml)		375	400	375	200
Weighing tin net weight, m_a (g)		0.0911	0.0144	0.0113	0.0012

Method 5B/202 Parameters		Run 1	Run 2	Run 3	Blank
<u>Filter</u>		12137	12130	12131	
Filter tare weight (g)	Trial 1	0.3512	0.3542	0.3528	
	Trial 2	0.3509	0.3541	0.3529	
	Average	0.3511	0.3542	0.3529	
Filter final weight (g)	Trial 1	0.3818	0.3636	0.3611	
	Trial 2	0.3814	0.3636	0.3613	
	Average	0.3816	0.3636	0.3612	
Filter net weight, m_f (g)		0.0306	0.0094	0.0083	
<u>PM_{2.5} Front Half Wash</u>	<i>Beaker ID</i>	50	203	222	X6
Beaker tare weight (g)	Trial 1	48.6102	87.0424	83.4629	3.6040
	Trial 2	48.6102	87.0427	83.4627	3.6039
	Average	48.6102	87.0426	83.4628	3.6040
Beaker final weight (g)	Trial 1	48.6440	87.0485	83.4684	3.6038
	Trial 2	48.6435	87.0484	83.4683	3.6036
	Average	48.6438	87.0485	83.4684	3.6037
Volume of Wash, V_{aw} (ml)		110	90	105	200
Beaker net weight, m_a (g)		0.0335	0.0059	0.0055	0.0000
<u>Organic Fraction</u>					
	<i>Weighing tin ID</i>	Z1	Z5	B1	X5
Weighing tin tare weight (g)	Trial 1	3.5553	3.5241	3.4512	3.5545
	Trial 2	3.5557	3.5239	3.4512	3.5546
	Average	3.5555	3.5240	3.4512	3.5546
Weighing tin final weight (g)	Trial 1	3.5578	3.5391	3.4573	3.5543
	Trial 2	3.5573	3.5387	3.4576	3.5542
	Average	3.5576	3.5389	3.4575	3.5543
Volume of Wash, V_{aw} (ml)		400	375	365	200
Weighing tin net weight, m_a (g)		0.0021	0.0149	0.0062	0.0000
<u>Inorganic Fraction</u>					
	<i>Weighing tin ID</i>	125	108	206	421
Weighing tin tare weight (g)	Trial 1	82.7021	84.9094	94.4489	106.1451
	Trial 2	82.7024	84.9093	94.4491	106.1449
	Average	82.7023	84.9094	94.4490	106.1450
Weighing tin final weight (g)	Trial 1	82.7183	84.9282	94.4693	106.1460
	Trial 2	82.7178	84.9284	94.4689	106.1464
	Average	82.7181	84.9283	94.4691	106.1462
Volume of Wash, V_{aw} (ml)		390	325	400	200
Weighing tin net weight, m_a (g)		0.0158	0.0190	0.0201	0.0012

Raw Data

Includes the following:

- *Filter Gravimetric Data Sheets*
- *Beaker Gravimetric Data Sheets*
- *Tin Gravimetric Data Sheets*

Filter Gravimetric Data Sheet

Run No.	Proj. No./Location	Appearance	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good	
2 Filter ID 12124	3648 Wilson ESP 1	light spots	Tare	0.3416	9/6 10:51	0.3416	6/10 11:37			✓
			Tech							
			Final	0.3438	7/27 15:49	0.3411	7/28 10:19			✓
			Tech		SH		MH			
			Notes							
2 Filter ID 12125	3648 Wilson Stack	light spots	Tare	0.3443	9/6 10:51	0.3442	6/10 11:33			✓
			Tech							
			Final	0.3508	7/27 16:51	0.3504	7/28 10:25			✓
			Tech		SH		MH			
			Notes							
1 Filter ID 12126	3648 Wilson ESP 4	Dots White	Tare	0.3445	9/6 10:52	0.3446	6/10 11:34			✓
			Tech							
			Final	0.3503	7/27 15:25	0.3503	7/28 10:10			✓
			Tech		SH		MH			
			Notes							
1 Filter ID 12127	3648 Wilson ESP 2	light spots	Tare	0.3419	9/6 10:52	0.3422	6/10 11:35			✓
			Tech							
			Final	0.3456	7/27 15:57	0.3459	7/28 10:31			✓
			Tech		SH		MH			
			Notes							
2 Filter ID 12128	3648 Coleman ESP 1	Brown	Tare	0.3403	9/6 10:53	0.3405	6/10 11:36			✓
			Tech							
			Final	0.5855	7/27 14:28	0.5841	7/28 9:42	0.5857	4.11 7/28	✓
			Tech		SH		MH		MH	
			Notes							
3 Filter ID 12129	3648 Coleman ESP 1	Brown	Tare	0.3536	9/6 11:10	0.3533	6/10 11:36			✓
			Tech							
			Final	0.5499	7/27 14:46	0.5499	7/28 9:41			✓
			Tech		SH		MH			
			Notes							
2 Filter ID 12130	3648 Coleman Stack	Black spots	Tare	0.3542	9/6 11:10	0.3541	6/10 11:37			✓
			Tech							
			Final	0.3643	7/27 14:51	0.3636	7/28 9:37	0.3636	7/28 4:13	✓
			Tech		SH		MH		MH	
			Notes							
3 Filter ID 12131	3648 Coleman Stack	Black spots	Tare	0.3528	9/6 11:11	0.3529	6/10 11:38			✓
			Tech							
			Final	0.3620	7/27 14:52	0.3611	7/28 9:39	0.3613	7/28 4:14	✓
			Tech		SH		MH		MH	
			Notes							
2 Filter ID 12132	3648 Coleman ESP 3	Black	Tare	0.3587	9/6 11:11	0.3584	6/10 11:38			✓
			Tech							
			Final	0.6082	7/27 14:50	0.6033	7/28 9:40	0.5924	8/1 9:46	✓
			Tech		SH		MH		MH	
			Notes							

Filter Grav

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Filter Gravimetric Data Sheet

Run No.	Proj. No./Location	Appearance	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good	
3 Filter ID 12133	3648 Coleman ESP-3	Black	Tare	0.3558	6/9 11:12	0.3558	6/10 11:40			
			Tech							
			Final	0.5525	7/27 14:52	0.5501	7/28 9:57	0.5457	7/29 9:46	✓
			Tech		SH		MH			
			Notes							
2 Filter ID 12134	3648 Coleman Esp 2	Black	Tare	0.3577	6/9 11:13	0.3575	6/10 11:40			
			Tech							
			Final	0.6472	7/27 14:53	0.6439	7/28 9:36	0.6318	7/29 16:03	✓
			Tech		SH		MH			
			Notes							
3 Filter ID 12135	3648 Coleman Esp 2	Black	Tare	0.3513	6/9 11:13	0.3514	6/10 11:41			
			Tech							
			Final	0.6147	7/27 14:57	0.6101	7/28 9:35	0.6019	7/29 9:44	✓
			Tech		SH		MH			
			Notes							
1 Filter ID 12136	3648 Coleman ESP1	Brown	Tare	0.3540	6/9 11:14	0.3543	6/10 11:41			
			Tech							
			Final	0.7083	7/25 11:10	0.7073	7/26 11:17	0.7071	7/27 15:12	✓
			Tech		1		MH		SH	
			Notes							
1 Filter ID 12137	3648 Coleman shk	Grey	Tare	0.3512	6/9 10:55	0.3509	6/10 11:42			
			Tech							
			Final	0.3862	7/25 11:07	0.3802	7/26 11:18	0.3864	7/27 15:07	✓
			Tech		1		MH		SH	
			Notes							
1 Filter ID 12138	3648 Coleman ESP2	B	Tare	0.3548	6/9 10:56	0.3549	6/10 11:42			
			Tech							
			Final	0.5135	7/25 11:08	0.5085	7/26 11:15	0.5057	7/27 15:15	✓
			Tech		1		MH		SH	
			Notes							
1 Filter ID 12139	3648 ESP3	B	Tare	0.3531	6/9 10:56	0.3536	6/10 11:43			
			Tech							
			Final	0.6084	7/25 11:11	0.6055	7/26 11:16	0.5999	7/27 15:14	✓
			Tech	0.5844	7/10:07	0.5847	7/11:16		SH	
			Notes		MH		MH			
3 Filter ID 12140	3648 Wilson ESP1	Light Spots	Tare	0.3534	6/9 10:57	0.3530	6/10 11:41			
			Tech							
			Final	0.3675	7/27 15:34	0.3671	7/28 10:22			
			Tech		SH		MH			
			Notes							
3 Filter ID 12141	3648 Wilson ESP 2	Light Spots	Tare	0.3574	6/9 10:53	0.3572	6/10 11:44			
			Tech							
			Final	0.3602	7/27 15:53	0.3601	7/28 10:34			
			Tech		SH		MH			
			Notes							

0.51
8/11
M

0.62
7/29
M

0.62
8/11
M

0.60
7/11
M

0.5810
7/28
M

0.381
7/28
M

0.597
7/29
M

0.597
5/37

Filter Grav

AIRTECH ENVIRONMENTAL SERVICES INC.
Beaker Gravimetric Data Sheet

PROJECT NO. 3648-Coleman

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Client	PDRSC	Date Received	7/11/11
Plant	Coleman		

Run No.	Location/Volume	Method/ Reagent	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good	
1	Stack	202	Tare	82.700	6/29 14:54	82.7024	6/30 9:26		✓	
			Tech							
			Final	82.7194	7/25 10:43	82.7184	7/26 11:05	82.7209	7/27 14:56	✓
			Tech							
Beaker ID	200+190	DI								
125	390 mls									
1	ESP1	202	Tare	83.0963	6/29 14:54	83.0965	6/30 9:27		✓	
			Tech							
			Final	83.1061	7/25 10:43	83.1055	7/26 11:05	83.1104	7/27 15:00	✓
			Tech							
Beaker ID	200+160	DI								
159	360 mls									
1	ESP2	202	Tare	97.5671	6/29 14:39	97.5670	6/30 9:27		✓	
			Tech							
			Final	97.6234	7/25 10:42	97.6230	7/26 11:06			✓
			Tech							
Beaker ID	200+135	DI								
47	335 mls									
1	ESP3	202	Tare	85.4473	6/29 14:35	85.4475	6/30 9:27		✓	
			Tech							
			Final	85.5256	7/25 10:44	85.5316	7/26 11:02	85.5388	7/27 15:01	✓
			Tech							
Beaker ID	200+175	DI								
201	375 mls									
2	Stack	202	Tare	84.9094	6/29 14:45	84.9093	6/30 9:26		✓	
			Tech							
			Final	84.9280	7/28 10:47	84.9284	7/29 10:06			✓
			Tech							
Beaker ID	200+125	DI								
166	325 mls									
2	ESP-1	202	Tare	94.5686	6/29 14:55	94.5689	6/30 9:26		✓	
			Tech							
			Final	94.6366	7/28 10:59	94.6370	7/29 16:25			✓
			Tech							
Beaker ID	200+150	DI								
204	350 mls									
2	ESP-2	202	Tare	85.0009	6/29 14:56	85.0012	6/30 9:25		✓	
			Tech							
			Final	85.0226	8/1 10:20	85.0228	8/1 16:42			✓
			Tech							
Beaker ID	200+150	DI								
301	350 mls									
2	ESP-3	202	Tare	101.2248	6/29 14:56	101.2247	6/30 9:25		✓	
			Tech							
			Final	101.2884	7/28 10:57	101.2886	7/29 11:21	101.2433	8/4 7:13	✓
			Tech							
Beaker ID	200+200	DI								
404	400 mls									

82.7183
7/28 10:00
MH

82.7174
8/1 10:00
MH

83.1100
7/28 9:51
MH

85.5388
8/8 10:35
MH

101.2574
8/5 7:23
?

101.2850
8/8 10:31
MH

2

AIRTECH ENVIRONMENTAL SERVICES INC.
Beaker Gravimetric Data Sheet

PROJECT NO. 3648-Coleman

Page of

Client	Big Rivers	Date Received	7/22/11
Plant	Coleman Station		

Run No.	Location/Volume	Method/ Reagent	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good	
3	Stack	202 DI	Tare	94.4496	7/7 7:29	94.4489	7/8 8:10	94.4491	7/11 5:48	✓
			Tech							
			Final	94.4693	7/28 10:50	94.4689	7/29 10:07			✓
			Tech		MH		MH			
			Notes							
Beaker ID	200+200									
206	400 mls									
3	ESP-1	202 DI	Tare	94.4546	7/7 7:30	94.4540	7/8 8:09	94.4544	7/11 5:46	✓
			Tech							
			Final	94.4870	7/28 10:59	94.6151	7/29 11:23	94.4869	8/4 7:00	✓
			Tech		MH		MH			
			Notes							
Beaker ID	200+75									
208	375 mls									
3	ESP-2	202 DI	Tare	86.2320	7/7 7:30	86.2313	7/8 8:09	86.2318	7/11 5:46	✓
			Tech							
			Final	86.2772	7/28 10:50	86.2789	7/29 10:12	86.2712	7/29 10:45	✓
			Tech		MH		MH		MH	
			Notes							
Beaker ID	200+175									
118	375 mls									
3	ESP-3	202 DI	Tare	86.0869	7/7 7:30	86.0865	7/8 8:08			✓
			Tech							
			Final	86.1160	7/28 10:54	86.1148	7/29 11:24	86.0982	8/4 7:07	✓
			Tech		MH		MH			
			Notes							
Beaker ID	200+175									
114	375 mls									
3			Tare	103.5487	7/7 7:31	103.5480	7/8 8:08	103.5484	7/11 5:47	✓
			Tech							
			Final							
			Tech							
			Notes							
Beaker ID										
	mls									
3			Tare	84.8560	7/7 7:31	84.8556	7/8 8:08			✓
			Tech							
			Final							
			Tech							
			Notes							
Beaker ID										
	mls									
3			Tare	85.8968	7/7 7:32	85.8962	7/8 8:07	85.8967	7/11 5:47	✓
			Tech							
			Final							
			Tech							
			Notes							
Beaker ID										
	mls									
3			Tare	86.8781	7/7 7:32	86.8779	7/8 8:07			✓
			Tech							
			Final							
			Tech							
			Notes							
Beaker ID										
	mls									

74.4864
8/5 7:21
7/1
86.2747
8/1 11:00
MH
86.0979
8/5 7:22
7

AIRTECH ENVIRONMENTAL SERVICES INC.

Beaker Gravimetric Data Sheet

PROJECT NO. 3648-Coleman

Page of

Client	BFC Rivers	Date Received	7/11/11
Plant	Coleman		

Run No.	Location/Volume	Method/ Reagent	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good	
1	Coleman stock	5B	Tare	48.6102	7/11 14:52	48.6102	7/12 9:31		✓	
			Tech		SH					
			Final	48.6388	7/25 10:42	48.6440	7/26 11:10	48.6435	7/27 15:05	✓
			Tech		/		MH		SH	
50	110 mls									
19	ESP1	5B	Tare	36.7938	7/11 14:54	36.7938	7/12 9:34		✓	
			Tech		SH					
			Final	36.9260	7/25 10:40	36.9265	7/26 11:12			✓
			Tech		/		MH			
19	120 mls									
31	ESP2	5B	Tare	36.3947	7/11 14:54	36.3952	7/12 9:33		✓	
			Tech		SH					
			Final	36.4789	7/25 10:41	36.4792	7/26 11:11			✓
			Tech		/		MH			
31	125 mls									
10	ESP3	5B	Tare	34.7663	7/11 14:55	34.7664	7/12 9:33		✓	
			Tech		SH					
			Final	34.8213	7/25 10:40	34.8227	7/26 11:12	34.8240	7/27 15:06	✓
			Tech		/		MH		SH	
10	135 mls									
60	ESP3		Tare	35.1141	7/11 14:56	35.1141	7/12 9:33		✓	
			Tech		SH					
			Final							
			Tech							
60	mls									
47	ESP3		Tare	37.3290	7/11 14:56	37.3286	7/12 9:33		✓	
			Tech		SH					
			Final							
			Tech							
47	mls									
32	ESP3		Tare	34.1294	7/11 14:58	34.128	7/12 9:32		✓	
			Tech		SH	7 75	/			
			Final							
			Tech							
32	mls									
53	ESP3		Tare	42.5127	7/11 14:59	42.5125	7/12 9:31	42	✓	
			Tech		SH		/			
			Final							
			Tech							
53	mls									

34.8225
7/27 9:45
MH
34.8226
7/28 9:10
MH

AIRTECH ENVIRONMENTAL SERVICES INC.
Beaker Gravimetric Data Sheet

PROJECT NO. 3648

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Client	<u>BREC</u>	Date Received	<u>7/22/11</u>
Plant	<u>Coleman Station</u>		

Run No.	Location/Volume	Method/ Reagent	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good	
2	ESP1	SB	Tare	84.1709	6/29	14:50	84.1709	6/30	9:24	✓
			Tech			ML		ML		
Beaker ID			Final	84.2415	7/27	15:20	84.2419	7/28	10:36	✓
129	180 mls	Acc	Tech		SH			MH		
			Notes							
3	ESP-1	SB	Tare	83.1576	6/29	14:50	83.1575	6/30	9:24	✓
			Tech			ML		ML		
Beaker ID			Final	83.2521	7/27	15:19	83.2525	7/28	10:36	✓
153	100 mls	Acc	Tech		SH			MH		
			Notes							
2	ESP-2	SB	Tare	103.7167	6/29	14:51	103.7166	6/30	9:23	✓
			Tech			ML		ML		
Beaker ID			Final	103.8350	7/27	15:23	103.8348	7/28	10:11	✓
52	125 mls	Acc	Tech		SH			MH		
			Notes							
3	ESP2	SB	Tare	104.9531	6/29	14:51	104.9531	6/30	9:23	✓
			Tech			ML		ML		
Beaker ID			Final	104.6833	7/27	15:19	104.6838	7/28	10:39	✓
60	100 mls	Acc	Tech		SH			MH		
			Notes							
2	ESP3	SB	Tare	102.5675	6/29	14:51	102.5674	6/30	9:23	✓
			Tech			ML		ML		
Beaker ID			Final	102.5928	7/27	15:21	102.5927	7/28	10:40	✓
71	100 mls	Acc	Tech		SH			MH		
			Notes							
3	ESP3	SB	Tare	83.9544	6/29	14:52	83.9546	6/30	9:22	✓
			Tech			ML		ML		
Beaker ID			Final	83.5064	7/27	15:21	83.5062	7/28	10:39	✓
307	100 mls	Acc	Tech		SH			MH		
			Notes							
2	stack	SB	Tare	87.0424	6/29	14:52	87.0424	6/30	9:22	✓
			Tech			ML		ML		
Beaker ID			Final	87.0485	7/27	15:18	87.0484	7/28	10:40	✓
203	90 mls	Acc	Tech		SH			MH		
			Notes							
3	stack	SB	Tare	83.4629	6/29	14:53	83.4628	6/30	9:21	✓
			Tech			ML		ML		
Beaker ID			Final	83.4684	7/27	15:22	83.4683	7/28	10:41	✓
222	105 mls	Acc	Tech		SH			MH		
			Notes							

AIRTECH ENVIRONMENTAL SERVICES INC.
Beaker Gravimetric Data Sheet

PROJECT NO. 3648 - Coleman

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Client	<u>BRSC</u>	Date Received	<u>7/11/11</u>
Plant	<u>Coleman</u>		

Run No.	Location/Volume	Method/ Reagent	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good	
1 Beaker ID Z1	Stack 190 + 210 400 mls	202 Ac/Hex	Tare	3.5553	7/7 7:32	3.5557	7/8 8:17		✓	
			Tech							
			Final	3.5578	7/25 10:44	3.5573	7/26 11:02		✓	
			Tech				MH			
Notes										
2 Beaker ID Z2	ESP1 190 + 400 mls	202 Ac/Hex	Tare	3.5409	7/7 7:32	3.5414	7/8 8:17		✓	
			Tech							
			Final	3.5564	7/25 10:45	3.5563	7/26 11:03		✓	
			Tech				MH			
Notes										
3 Beaker ID Z3	ESP2 410 240 mls	202 Ac/Hex	Tare	3.5383	7/7 7:32	3.5383	7/8 8:16		✓	
			Tech							
			Final	3.5484	7/25 10:47	3.5480	7/26 11:01		✓	
			Tech				MH			
Notes										
4 Beaker ID Z4	ESP3 415 + 245 mls	202 Ac/Hex	Tare	3.5859	7/7 7:33	3.5866	7/8 8:16	3.5866	7/11 5:50	✓
			Tech							
			Final	3.5935	7/25 10:45	3.5930	7/26 11:01		✓	
			Tech				MH			
Notes										
5 Beaker ID Z5	Stack 200 + 175 mls	202 Hex/Ace	Tare	3.5241	7/7 7:33	3.5239	7/8 8:15		✓	
			Tech							
			Final	3.5379	7/27 14:39	3.5391	7/28 9:59	3.5387	7/28 16:05	✓
			Tech		SH		MH		MH	
Notes										
6 Beaker ID Z6	ESP-1 200 + 175 mls	202 Hex/Ace	Tare	3.5279	7/7 7:34	3.5282	7/8 8:15		✓	
			Tech							
			Final	3.5348	7/27 14:33	3.5402	7/28 9:57		✓	
			Tech		SH		MH			
Notes										
7 Beaker ID Z7	ESP-2 200 + 175 mls	202 Hex/Ace	Tare	3.4976	7/7 7:34	3.4978	7/8 8:14		✓	
			Tech							
			Final	3.5049	7/27 14:38	3.5049	7/28 9:55		✓	
			Tech		SH		MH			
Notes										
8 Beaker ID Z8	ESP-3 200 + 150 mls	202 Hex/Ace	Tare	3.5070	7/7 7:35	3.5075	7/8 8:14		✓	
			Tech							
			Final	3.5121	7/27 14:38	3.5123	7/28 9:56		✓	
			Tech		SH		MH			
Notes										

AIRTECH ENVIRONMENTAL SERVICES INC.
Beaker Gravimetric Data Sheet

PROJECT NO. 3648-Coleman

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Client	Big Rivers	Date Received	7/22/11
Plant	Coleman Station		

Run No.	Location/Volume	Method/ Reagent	Weight	Date / Time	Weight	Date / Time	Weight	Date / Time	Good
3	Stack 200+165	Zorc Hex/Hex	Tare	3.4512	6/30 9:36	3.4512	6/30 15:51		✓
			Tech						
			Final	3.4573	7/27 14:37	3.4576	7/28 9:57		✓
			Tech		SH		MH		
			Notes						
Beaker ID									
B1	mls								
3	ESP-1 200+160	Zorc Hex/Hex	Tare	3.4142	6/30 9:36	3.4143	6/30 15:56		✓
			Tech						
			Final	3.4328	7/27 14:31	3.4329	7/28 9:56		✓
			Tech		SH		MH		
			Notes						
Beaker ID									
B2	mls								
3	ESP-2 200+180	Zorc Hex/Hex	Tare	3.4852	6/30 9:35	3.4849	6/30 15:56		✓
			Tech						
			Final	3.5036	7/27 14:40	3.5039	7/28 9:58		✓
			Tech		SH		MH		
			Notes						
Beaker ID									
B3	mls								
3	ESP-3 200+180	Zorc Hex/Hex	Tare	3.6066	6/30 9:35	3.6084	6/30 15:57		✓
			Tech						
			Final	3.6182	7/27 14:31	3.6187	7/28 9:59		✓
			Tech		SH		MH		
			Notes						
Beaker ID									
B4	mls								
3			Tare	3.5777	6/30 9:35	3.5777	6/30 15:57		✓
			Tech						
			Final						
			Tech						
			Notes						
Beaker ID									
B5	mls								
3			Tare	3.5778	6/30 9:34	3.5779	6/30 15:57		✓
			Tech						
			Final						
			Tech						
			Notes						
Beaker ID									
B6	mls								
3			Tare	3.5467	6/30 9:34	3.5468	6/30 15:58		✓
			Tech						
			Final						
			Tech						
			Notes						
Beaker ID									
B7	mls								
3			Tare	3.5163	6/30 9:33	3.5162	6/30 15:58		✓
			Tech						
			Final						
			Tech						
			Notes						
Beaker ID									
B8	mls								

Sample Chain of Custody

Includes the following:

- *Sample Chain of Custody*

Calibration Data

Includes the following:

- *Daily Analytical Balance Calibration Log*
- *Yearly Analytical Balance Test and Calibration Certificate*

AIRTECH ENVIRONMENTAL SERVICES INC.
Analytical Balance Daily Calibration

Scale ID	Ohaus AV114C
Units of Measure	grams

Full Cal Test Date	4/12/11
--------------------	---------

Date	Tech Initials	100.0000g	5.0000g	0.1000g	Barometric Pressure (in. Hg)	Relative Humidity (%)	Ambient Temp (°F)	Notes
4/25/11	TL	99.9999	4.9999	0.1001	29.3	47	68	
4/26/11	NR	49.9999	5.0000	0.1000	29.9	60	70	
4/27/11	NR	100.0001	5.0000	0.1001	29.9	60	70	
4/28/11	NR	100.0000	5.0000	0.1001	29.2	55	70	
4/29/11	NR	100.0002	5.0000	0.0999	29.4	50	70	
4/30/11	NR	100.0001	5.0000	0.1000	29.4	50	68	
5/1/11	TL	100.0000	5.0000	0.1000	29.5	48	70	
5/3/11	TL	99.9999	4.9999	0.0999	29.6	46	68	
5/4/11	TL	99.9998	5.0000	0.1000	29.8	45	68	
5/5/11	TL	100.0000	5.0000	0.1001	29.5	46	70	
5/6/11	TL	99.9999	4.9999	0.0999	29.2	47	70	
5/16/11	NR	100.0000	5.0000	0.1000	29.4	45	70	
5/17/11	NR	100.0002	4.9999	0.1000	29.4	45	70	
5/18/11	NR	100.0000	4.9999	0.0999	29.4	45	72	
5/19/11	NR	100.0001	5.0000	0.1001	29.5	50	71	
5/20/11	NR	100.0001	4.9999	0.1000	29.6	50	75	
5/21/11	NR	100.0000	4.9999	0.1000	29.4	50	67	
5/22/11	NR	99.9999	4.9999	0.1001	29.5	50	65	
5/23/11	TL	99.9999	4.9999	0.0999	28.9	47	74	
5/24/11	TL	100.0001	4.9999	0.1000	29.1	48	70	
5/25/11	TL	100.0000	5.0000	0.1000	29.4	45	73	
5/26/11	TL	100.0000	4.9999	0.0998	29.6	48	74	
6/2/11	TL	100.0000	5.0000	0.0999	29.6	44	72	
6/6/11	TL	100.0000	5.0001	0.1000	29.7	47	68	
6/8/11	NR	100.0001	4.9999	0.0999	29.3	50	76	
6/9/11	NR	100.0002	5.0000	0.1001	29.4	50	71	
6/10/11	NR	100.0001	5.0000	0.0999	29.5	50	68	
6/13/11	TL	100.0000	4.9999	0.0999	29.6	44	64	
6/16/11	EA	100.0002	5.0001	0.1000	29.2	60	68	
6/22/11	TL	100.0000	5.0001	0.1001	28.9	48	65	
6/24/11	LR	100.0001	5.0000	0.1000	29.10	64	68	
6/27/11	TL	100.0000	4.9999	0.0999	29.2	65	68	
6/28/11	NR	100.0001	5.0000	0.1000	29.4	50	68	
6/30/11	NR	100.0000	5.0000	0.1000	29.6	50	68	
7/7/11	TL	100.0000	5.0000	0.1000	29.4	48	70	
7/8/11	TL	100.0001	4.9999	0.1000	29.4	47	70	
7/11/11	TL	99.9999	5.0001	0.1001	29.2	47	70	
7/12/11	TL	100.0000	5.0000	0.1000	29.4	48	65	
7/13/11	TL	100.0000	4.9999	0.0999	29.3	42	66	
7/15/11	TL	100.0000	4.9999	0.0999	29.3	41	70	



AUTOMATED SCALE CORPORATION

202 W. Fay Ave. Addison, IL 60101 800/498-6650

TEST & CALIBRATION CERTIFICATE

Tests and/or calibrations shall stop when environmental conditions will jeopardize the results. (rain, wind, vibration, temperature, and etc.)

L-A-B Accredited: Certificate #L1053-1
Standards Used: Traceable through NIST to the SI units
Test equipment and weight (s) certificates available on request

Client Name & Address <i>A/C Tech</i> <i>601 A Country Club</i> <i>Benseville</i>	Location (Plant and / or Dept.) <i>L9B</i> <i>NA</i> <i>Contact: Jim C</i>	Procedure used: 5.4-02 Process Control
Uncertainty of measurement (UM)	Yes [] No [X]	Temperature
Yes [X] No []	Identified metrological reference: NIST Handbook 44	

Manufacturer <i>Omni S</i>	Model # <i>AV114C</i>	Serial # <i>8028031056</i>	Capacity X Grad. <i>110g x 0.0001</i>
Platform: <i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
Inspection Cycle: <i>365 day</i>	Equipment ID: <i>NA</i>		

Date	Client Tolerance (%)		As Found/Left Shift Test		As Found		As Left		Pass/Fail		Temp. F°	Tech	Traceable
	A	B	Zero	Zero	AMT 1	AMT 2	AMT 1	AMT 2	P/F	UM			
4-13-10	50.0000	50.0000	0	0	50.0000	50.0000	50.0000	50.0000	P	NA	74	1J	# 1538014 ID ASTM 014
4-12-11	50.0000	50.0000	0	0	50.0000	50.0000	50.0000	50.0000	P	NA	74	BR	# 1538014 ID ASTM 014
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID
	F	L											# ID

Comments:

Pass/fail compliance statements are the opinions of Automated Scale Corp. based on data from measurements made, procedure utilized, professional experience, and the uncertainty associated with this calibration. It is the responsibility of the user of this equipment to determine if the results identified meet specific requirements for its intended application. Associated uncertainty (as applicable) is expressed as a confidence level of approximately 95% with a coverage factor of k=2.

Form: 5.4.02 L-A-B Accredited Process Control Certificate 3/2/10



AIRTECH
*Environmental
Services Inc.*

Ion Chromatography Analytical Report

Performed for
Big Rivers Energy
Coleman Station
Project No. 3648
July 25, 2011

Analyst: _____

Michael Ogletree
Michael Ogletree

Reviewer: _____

Patrick Clark
Patrick Clark P.E.

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<i>Condition of Samples When Received.....</i>	<i>2</i>
<i>Methodology.....</i>	<i>3</i>
<i>Detection Limit.....</i>	<i>3</i>
<i>QA/QC.....</i>	<i>3</i>

APPENDIX

Results
Calibration Data
Raw Data
Chain of Custody

Project Summary

General

Project Information	
Date Received	7/12/2011
Analytical Protocol	EPA Method 26A
Total Number of Samples Received	13
Total Number of Blanks Received	1

Analytical Equipment

Equipment Information	Manufacturer	Model	Serial No.
Ion Chromatograph	Dionex	ICS-90	02070247
Analytical Column	Dionex	AS14A	007967
Guard Column	Dionex	AG14A	009807
Anion Suppressor	Dionex	AMMS III 4 mm	1934

Parameters	Conditions
Eluent	8.0 mM Sodium Carbonate/1.0 mM Sodium Bicarbonate
Regenerant	0.075 N Sulfuric Acid
Sample Volume	10 µl
Flow Rate	1.0 ml/m
Back Pressure	2,750 PSI

Condition of Samples When Received

Samples were received for analysis in good condition. The samples are summarized in the table below:

Sample ID	Solution	Volume (ml)
Reagent Blank	0.1 N H ₂ SO ₄	523.4
Common Stack Run 1	0.1 N H ₂ SO ₄	873.6
Common Stack Run 2	0.1 N H ₂ SO ₄	828.6
Common Stack Run 3	0.1 N H ₂ SO ₄	913.4
ESP Exhaust Unit 1 Run 1	0.1 N H ₂ SO ₄	546.8
ESP Exhaust Unit 1 Run 2	0.1 N H ₂ SO ₄	671.5
ESP Exhaust Unit 1 Run 3	0.1 N H ₂ SO ₄	641.4
ESP Exhaust Unit 2 Run 1	0.1 N H ₂ SO ₄	536.7
ESP Exhaust Unit 2 Run 2	0.1 N H ₂ SO ₄	570.8
ESP Exhaust Unit 2 Run 3	0.1 N H ₂ SO ₄	601.3
ESP Exhaust Unit 3 Run 1	0.1 N H ₂ SO ₄	599.5
ESP Exhaust Unit 3 Run 2	0.1 N H ₂ SO ₄	520.5
ESP Exhaust Unit 3 Run 3	0.1 N H ₂ SO ₄	482.5

Methodology

All samples were analyzed according to the EPA Method 26A procedures found in 40 CFR Part 60 Appendix A.

Detection Limit

The detection limits for HCl and HF were determined using the procedures found in 40 CFR Part 136, Appendix B, entitled "Definition and Procedure for the Determination of the Method Detection Limit". Seven injections of the 0.5 µg/ml standard were analyzed. The detection limit was determined to be <0.0441 µg/ml for Cl⁻ and <0.0647 µg/ml for F⁻.

QA/QC

All sample analysis was performed in duplicate with a percent difference within five percent (5%) of the mean.

The chloride and fluoride calibration curve were generated using four calibration standards. The standards were prepared by diluting NIST traceable chloride and fluoride standards with 0.1 N H₂SO₄.

The chloride standard used for this project was a 1000 µg/ml chloride solution, lot number 030513, manufactured by Dionex Corporation of Sunnyvale, California.

The fluoride standard used for this project was a 1000 µg/ml fluoride solution, lot number 091209, manufactured by Dionex Corporation of Sunnyvale, California.

Appendix

Includes the following:

- Results
- Calibration Data
- Raw Data
- Chain of Custody

Results

Includes the following:

- **Hydrogen Chloride Results**
- **Hydrogen Fluoride Results**

HYDROGEN CHLORIDE ANALYSIS

Sample Parameters	Reagent Blank	Common Stack Run 1	Common Stack Run 2	Common Stack Run 3
Volume (ml)	523	874	829	813
Dilution factor	1	1	1	1
Peak Area # 1	0.0000	0.1060	0.1010	0.0680
Peak Area # 2	0.0000	0.1080	0.0990	0.0650
Average	0.000	0.106	0.100	0.0650
Injections % of mean	NA	0.0%	1.0%	0.0%

RESULTS

Chloride (µg/ml)	< 0.0441	1.14	1.09	0.741
Hydrogen Chloride (µg/ml)	< 0.0454	1.18	1.12	0.762
Hydrogen Chloride (mg)	< 0.0238	1.03	0.925	0.696

HYDROGEN FLUORIDE ANALYSIS

Sample Parameters	Reagent Blank	Common Stack Run 1	Common Stack Run 2	Common Stack Run 3
Volume (ml)	523	874	829	813
Dilution factor	1	1	1	1
Peak Area # 1	0.0000	0.0420	0.0550	0.0360
Peak Area # 2	0.0000	0.0420	0.0550	0.0360
Average	0.000	0.0420	0.0550	0.0360
Injections % of mean	NA	0.0%	0.0%	0.0%

RESULTS

Fluoride (µg/ml)	< 0.0647	0.737	0.821	0.698
Hydrogen Fluoride (µg/ml)	< 0.0682	0.776	0.865	0.735
Hydrogen Fluoride (mg)	< 0.0357	0.678	0.717	0.671

HYDROGEN CHLORIDE ANALYSIS

Sample Parameters	ESP Exhaust	ESP Exhaust	ESP Exhaust
	Unit 1 Run 1	Unit 1 Run 2	Unit 1 Run 3
Volume (ml)	547	672	641
Dilution factor	26.0	26.0	26.0
Peak Area # 1	1.6900	1.7710	1.8160
Peak Area # 2	1.6960	1.7120	1.8130
Average	1.67	1.74	1.61
Injections % of mean	1.0%	1.7%	0.1%

RESULTS

Chloride (µg/ml)	431	448	416
Hydrogen Chloride (µg/ml)	443	461	428
Hydrogen Chloride (mg)	242	310	274

HYDROGEN FLUORIDE ANALYSIS

Sample Parameters	ESP Exhaust	ESP Exhaust	ESP Exhaust
	Unit 1 Run 1	Unit 1 Run 2	Unit 1 Run 3
Volume (ml)	547	672	641
Dilution factor	1	1	1
Peak Area # 1	0.2190	0.2180	0.1980
Peak Area # 2	0.2100	0.2040	0.1940
Average	0.215	0.209	0.187
Injections % of mean	2.1%	2.2%	1.3%

RESULTS

Fluoride (µg/ml)	1.86	1.82	1.74
Hydrogen Fluoride (µg/ml)	1.96	1.92	1.83
Hydrogen Fluoride (mg)	1.07	1.29	1.18

HYDROGEN CHLORIDE ANALYSIS

Sample Parameters	ESP Exhaust	ESP Exhaust	ESP Exhaust
	Unit 2 Run 1	Unit 2 Run 2	Unit 2 Run 3
Volume (ml)	537	571	601
Dilution factor	51	26	51
Peak Area # 1	1.3820	1.3840	0.7320
Peak Area # 2	1.3910	1.3820	0.7300
Average	1.39	1.36	0.731
Injections % of mean	0.3%	0.1%	0.1%

RESULTS

Chloride (µg/ml)	701	358	372
Hydrogen Chloride (µg/ml)	721	367	383
Hydrogen Chloride (mg)	387	209	230

HYDROGEN FLUORIDE ANALYSIS

Sample Parameters	ESP Exhaust	ESP Exhaust	ESP Exhaust
	Unit 2 Run 1	Unit 2 Run 2	Unit 2 Run 3
Volume (ml)	537	571	601
Dilution factor	51	26	51
Peak Area # 1	0.1300	0.1340	0.0890
Peak Area # 2	0.1340	0.1330	0.0870
Average	0.132	0.134	0.0880
Injections % of mean	1.5%	0.4%	1.1%

RESULTS

Fluoride (µg/ml)	67.4	34.6	52.8
Hydrogen Fluoride (µg/ml)	71.0	36.5	55.6
Hydrogen Fluoride (mg)	38.1	20.8	33.4

HYDROGEN CHLORIDE ANALYSIS

Sample Parameters	ESP Exhaust	ESP Exhaust	ESP Exhaust
	Unit 3 Run 1	Unit 3 Run 2	Unit 3 Run 3
Volume (ml)	600	521	483
Dilution factor	1	1	1
Peak Area # 1	0.0000	0.0000	0.0880
Peak Area # 2	0.0000	0.0000	0.0890
Average	0.000	0.000	0.0885
Injections % of mean	NA	NA	0.6%

RESULTS

Chloride (µg/ml)	< 0.0441	< 0.0441	0.973
Hydrogen Chloride (µg/ml)	< 0.0454	< 0.0454	1.00
Hydrogen Chloride (mg)	< 0.0272	< 0.0236	0.483

HYDROGEN FLUORIDE ANALYSIS

Sample Parameters	ESP Exhaust	ESP Exhaust	ESP Exhaust
	Unit 3 Run 1	Unit 3 Run 2	Unit 3 Run 3
Volume (ml)	600	521	483
Dilution factor	1	1	1
Peak Area # 1	0.0000	0.0190	0.0190
Peak Area # 2	0.0000	0.0190	0.0190
Average	0.000	0.0190	0.0190
Injections % of mean	NA	0.0%	0.0%

RESULTS

Fluoride (µg/ml)	< 0.0647	0.587	0.587
Hydrogen Fluoride (µg/ml)	< 0.0682	0.618	0.618
Hydrogen Fluoride (mg)	< 0.0409	0.322	0.296

Calibration Data

Includes the following:

- **Hydrogen Chloride Standards**
- **Hydrogen Fluoride Standards**
- **Detection Limits**
- **Hydrogen Chloride Calibration Curve**
- **Hydrogen Fluoride Calibration Curve**

IC Operating Conditions

Ion Chromatograph	Dionex ICS-80
Data Acquisition	Dionex PeakNet 6.4
Carrier Gas	Nitrogen
Injection Type	Manual
Injection Volume (µl)	10.0
Column Type	AS-14A
Detector Type	Suppressed Conductivity ECD-1

Calibration Summary	Standard 1	Standard 2	Standard 3	Standard 4
Chloride (µg/ml)	1.0	5.0	10.0	20.0
Pre Analysis Injection # 1	0.1030	0.4820	0.9570	1.9390
Pre Analysis Injection # 2	0.1030	0.4810	0.9570	2.0100
Average	0.103	0.482	0.962	1.97
% difference of injections	0.0%	0.2%	1.0%	3.5%
Post Analysis Injection # 1	0.1070	0.4920	1.0200	2.0910
Post Analysis Injection # 2	0.1090	0.5110	1.0120	2.0850
Average	0.108	0.50	1.02	2.09
% difference of injections	1.8%	3.7%	0.8%	0.3%
Overall Average	0.106	0.492	0.989	2.03
Pre/Post Analysis, % of mean	2.4%	2.0%	2.7%	2.8%

RESULTS

Response Factor	9.48	10.2	10.1	9.85
Slope	9.84			
Intercept	0.102			

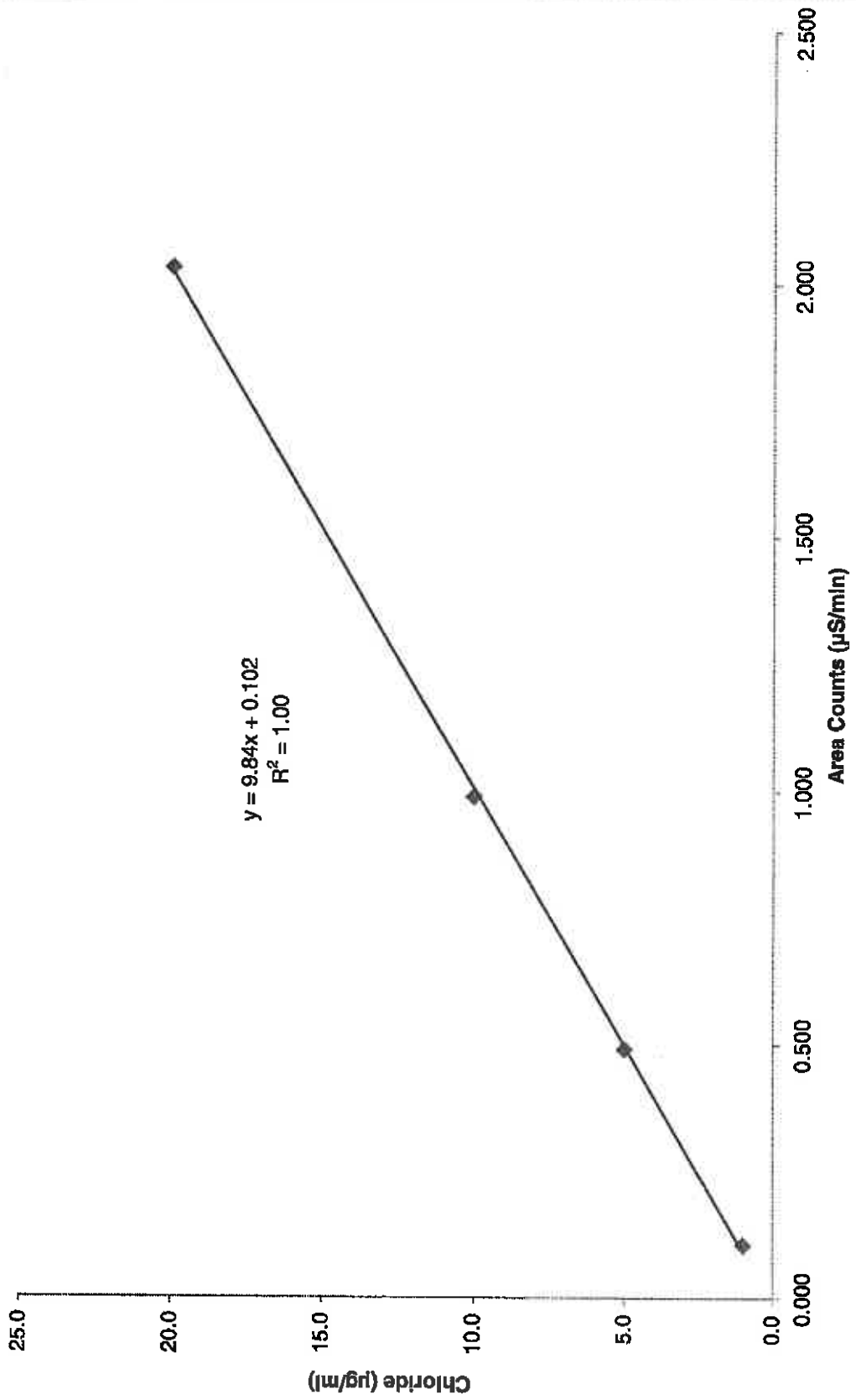
Calibration Summary	Standard 1	Standard 2	Standard 3	Standard 4
Fluoride (µg/ml)	1.0	5.0	10.0	20.0
Pre Analysis Injection # 1	0.1110	0.6700	1.3840	2.9070
Pre Analysis Injection # 2	0.1150	0.6620	1.4070	3.0130
Average	0.113	0.67	1.40	2.96
% difference of injections	3.5%	1.2%	1.6%	3.5%
Post Analysis Injection # 1	0.1260	0.6840	1.4740	3.0750
Post Analysis Injection # 2	0.1230	0.6840	1.4750	3.1050
Average	0.125	0.68	1.47	3.09
% difference of injections	2.4%	0.0%	0.1%	1.0%
Overall Average	0.119	0.68	1.44	3.03
Pre/Post Analysis, % of mean	4.8%	1.3%	2.6%	2.1%

RESULTS

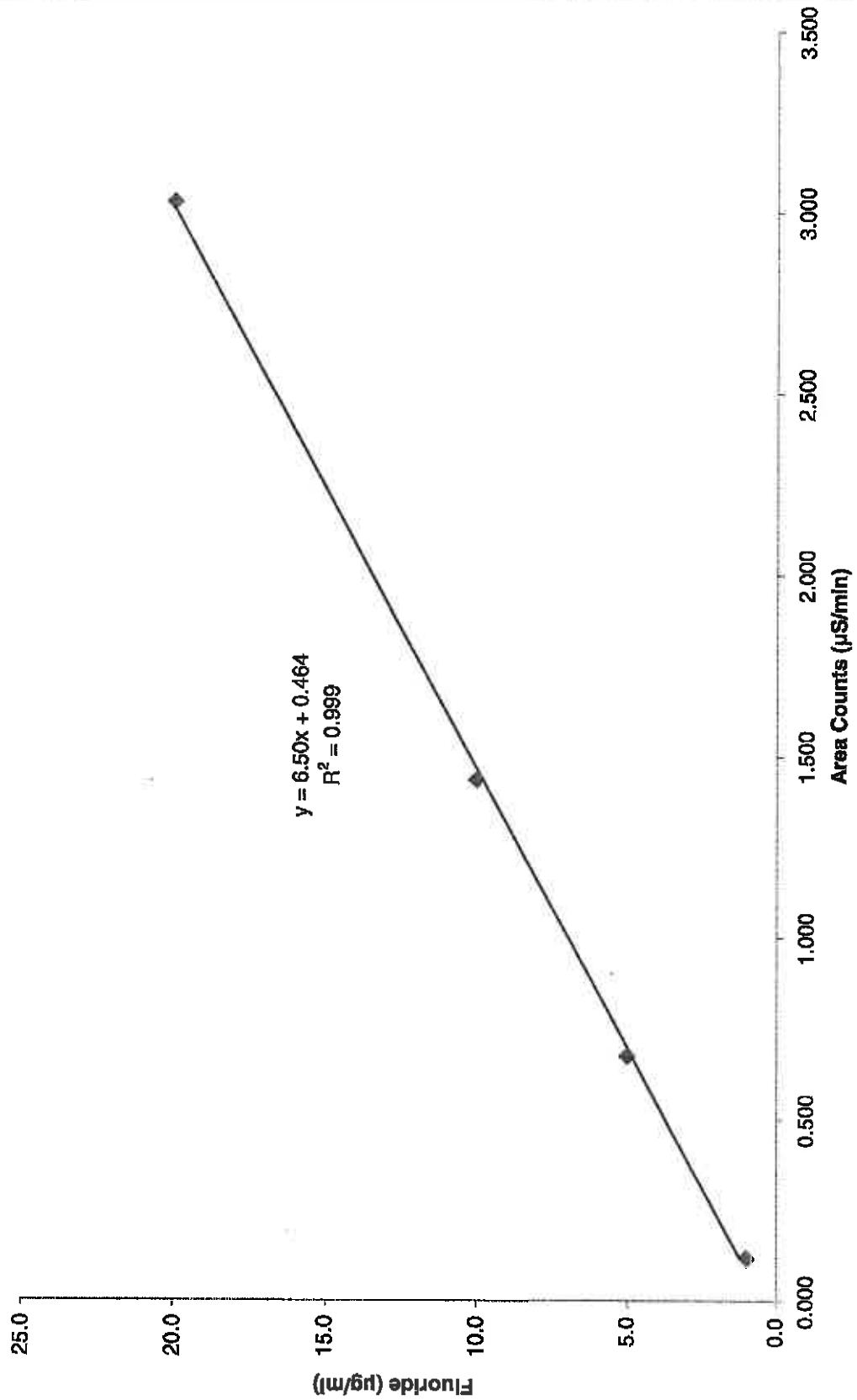
Response Factor	8.42	7.41	6.97	6.61
Slope	6.50			
Intercept	0.484			

Drift Check (7/20/10)		
	Chloride	Fluoride
Chloride (µg/ml)	5.0	5.0
Pre Analysis Injection # 1	0.6270	0.4870
Pre Analysis Injection # 2	0.6380	0.4900
Average	0.63	0.49
% difference of injections	1.9%	0.8%
Drift Check (7/21/11)		
	Chloride	Fluoride
Chloride (µg/ml)	5.0	5.0
Pre Analysis Injection # 1	0.6300	0.4950
Pre Analysis Injection # 2	0.6500	0.5030
Average	0.64	0.50
% difference of injections	3.1%	1.8%
Detection Limit Parameters		
	Chloride	Fluoride
Standard (µg/ml)	0.5	0.5
Injection 1	0.064	0.073
Injection 2	0.059	0.067
Injection 3	0.059	0.065
Injection 4	0.060	0.065
Injection 5	0.059	0.065
Injection 6	0.059	0.062
Injection 7	0.057	0.064
Average	0.0596	0.0659
RESULTS		
Response Factor	8.39	7.59
Standard Deviation	0.00215	0.00348
No of Samples (n)	7	7
Student t value ($t_{p,df}$)	2.447	2.447
Calculated limit of detection (µg/ml)	0.0441	0.0647

Chloride Calibration



Fluoride Calibration



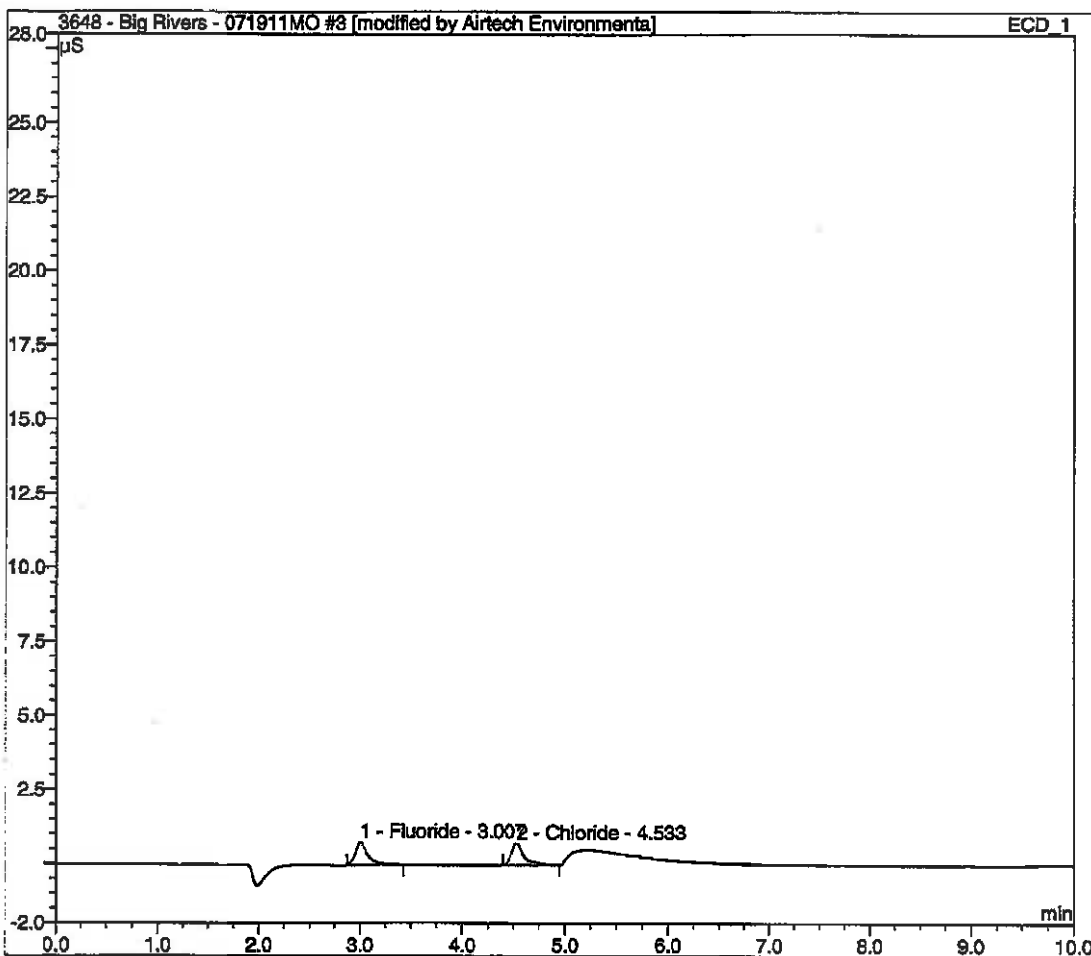
Raw Data

Includes the following:

- **Pre Analysis Chromatograms**
- **Sample Chromatograms**
- **Drift Check Chromatograms**
- **Post Analysis Chromatograms**
- **Lab Book Data Entry**

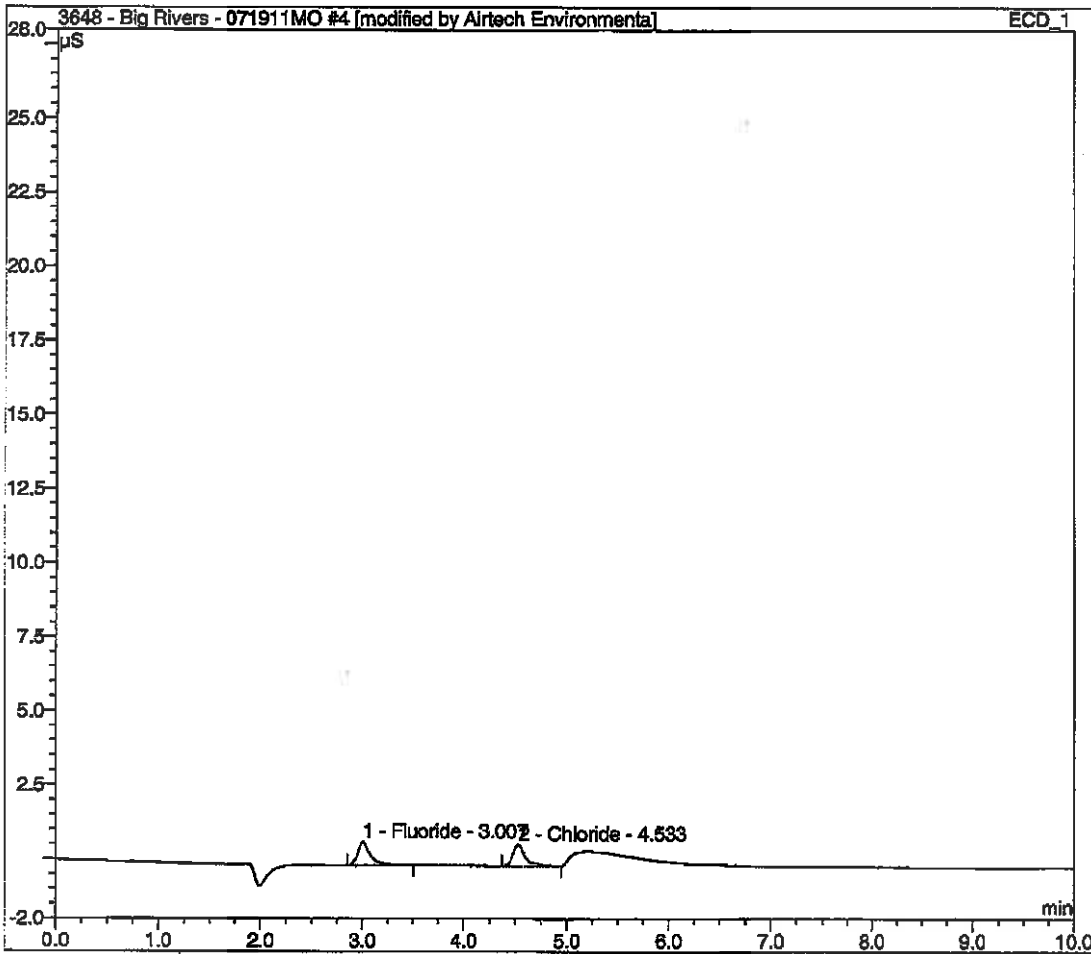
Sample Name	cal std 1 - Cl & F in H2SO4	Inj Vol	10.0
Sample Type	standard	Dilutor Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj Date/Time	19.07.11 09:56	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	3.01	Fluoride	BMB*	0.111	0.783	0.1022
2	4.53	Chloride	BMB*	0.103	0.718	0.1368
TOTAL:				0.21	1.50	0.24



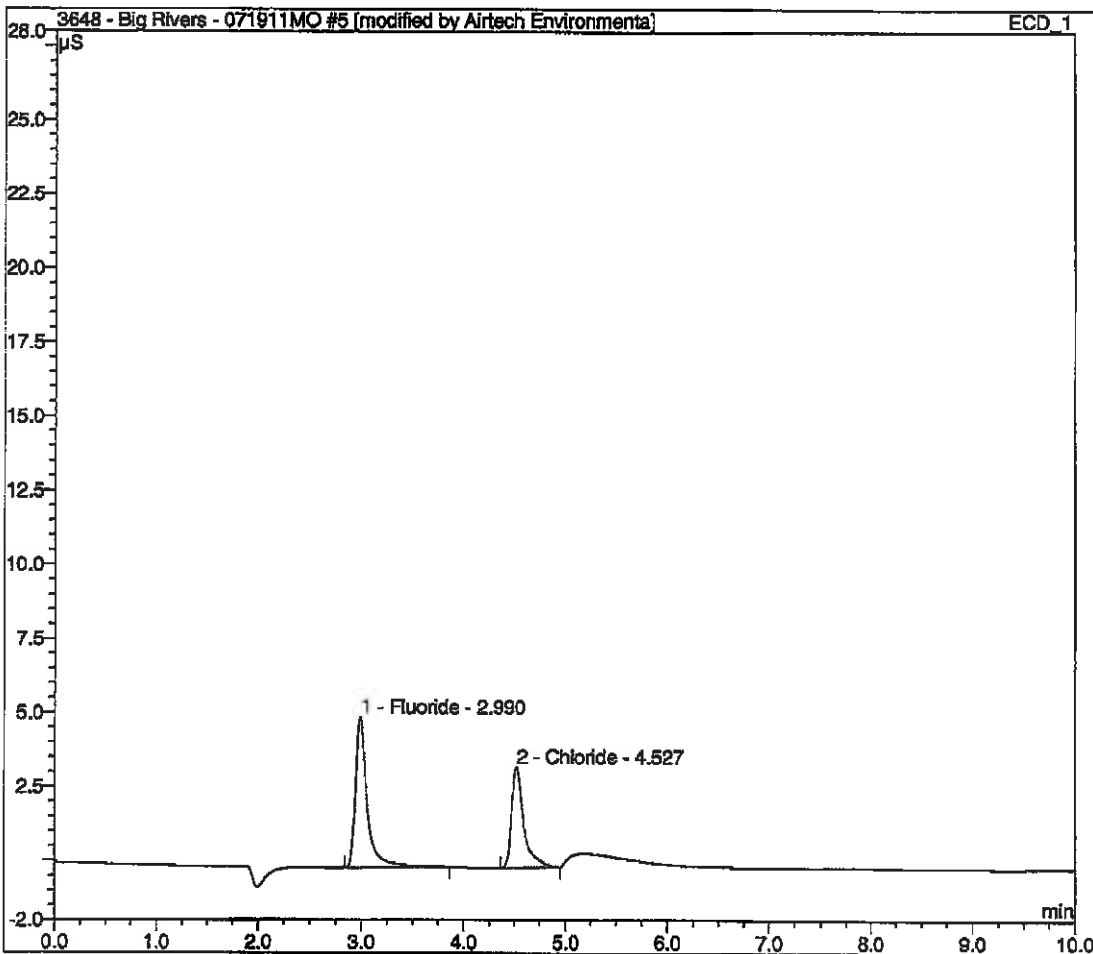
Sample Name:	cal std 1 - Cl & F in H2SO4	Inj. vol:	10.0
Sample Type:	standard	Dilution Factor:	1.0000
Program:	ChlorideCat	Operator:	a.a.
Inj. Date/Time:	19.07.11 10:11	Run Time:	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	3.01	Fluoride	BMB	0.115	0.796	0.1061
2	4.53	Chloride	BMB	0.103	0.723	0.1369
TOTAL:				0.22	1.52	0.24



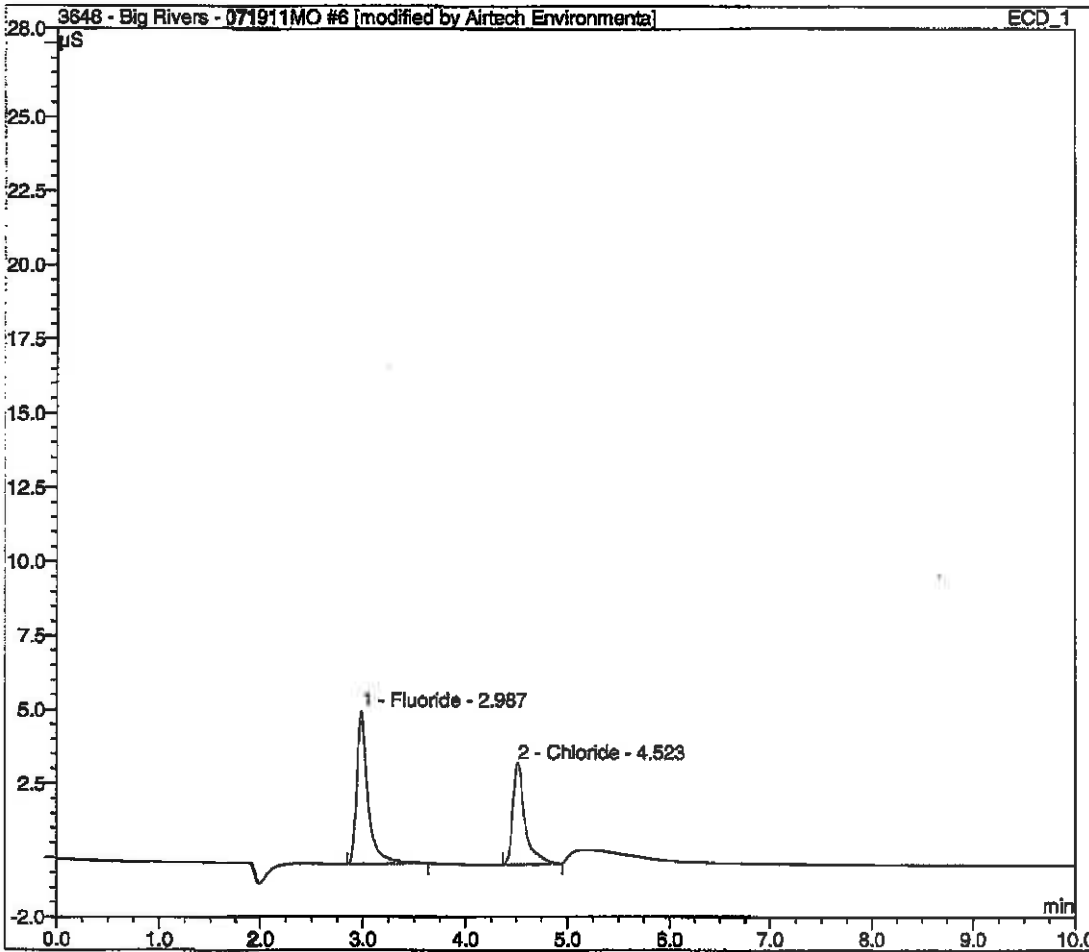
Sample Name	cal std 2 - Cl & F in H2SO4	Inj Vol	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	Chloride Cal	Operator	n.a.
Inj Date/Time	19.07.11 10:27	Run Time	15.00

No.	Time (min)	Peak Name	Type	Area (µS*min)	Height (µS)	Amount (µg/ml)
1	2.99	Fluoride	BMB*	0.670	5.076	0.6172
2	4.53	Chloride	BMB*	0.482	3.400	0.6420
TOTAL:				1.15	8.48	1.26



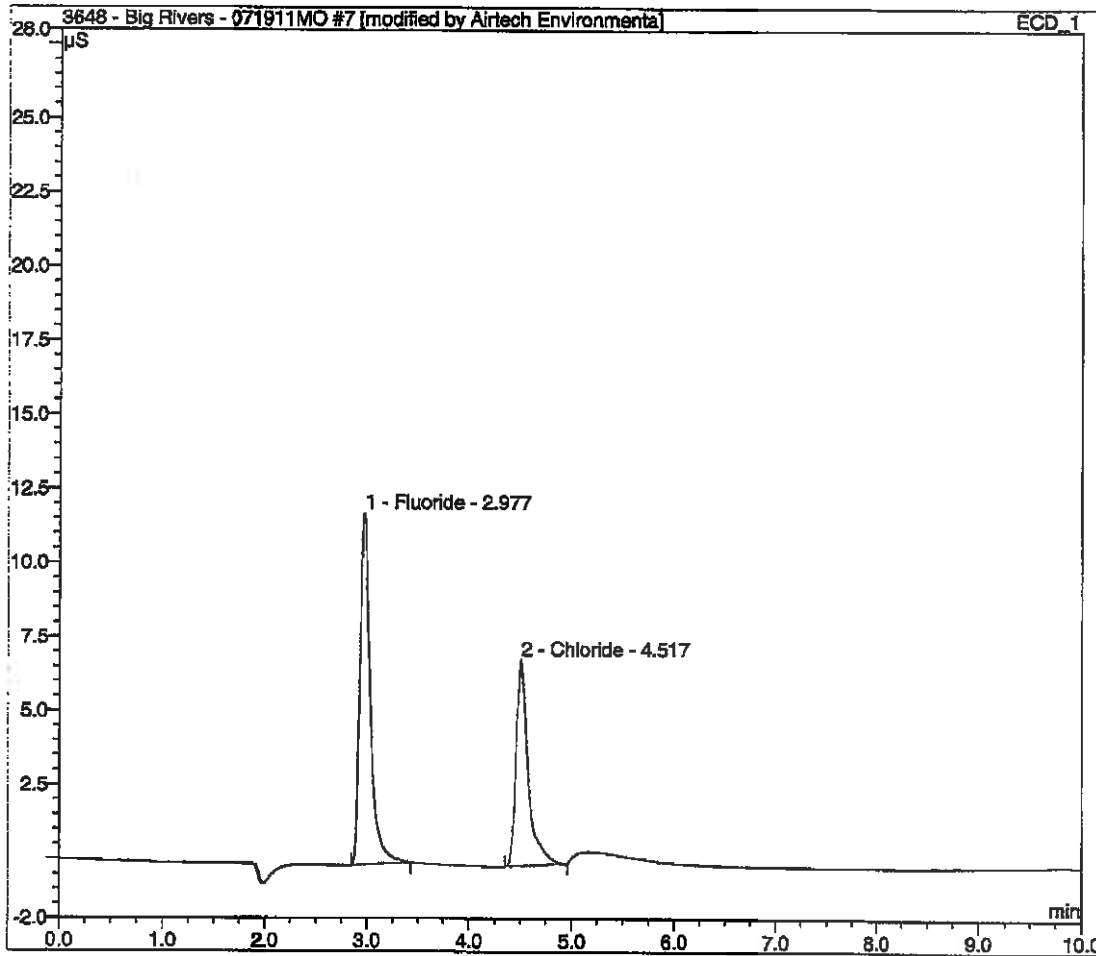
Sample Name	cal std 2 - Cl & F in H2SO4	Inj Vol	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	18.07.11 10:42	Run Time	15.00

No.	Time min	Peak Name	Type	Area μ S.min	Height μ S	Amount μ g/mL
1	2.99	Fluoride	BMB*	0.662	5.174	0.6099
2	4.52	Chloride	BMB*	0.481	3.430	0.6410
TOTAL:				1.14	8.60	1.25



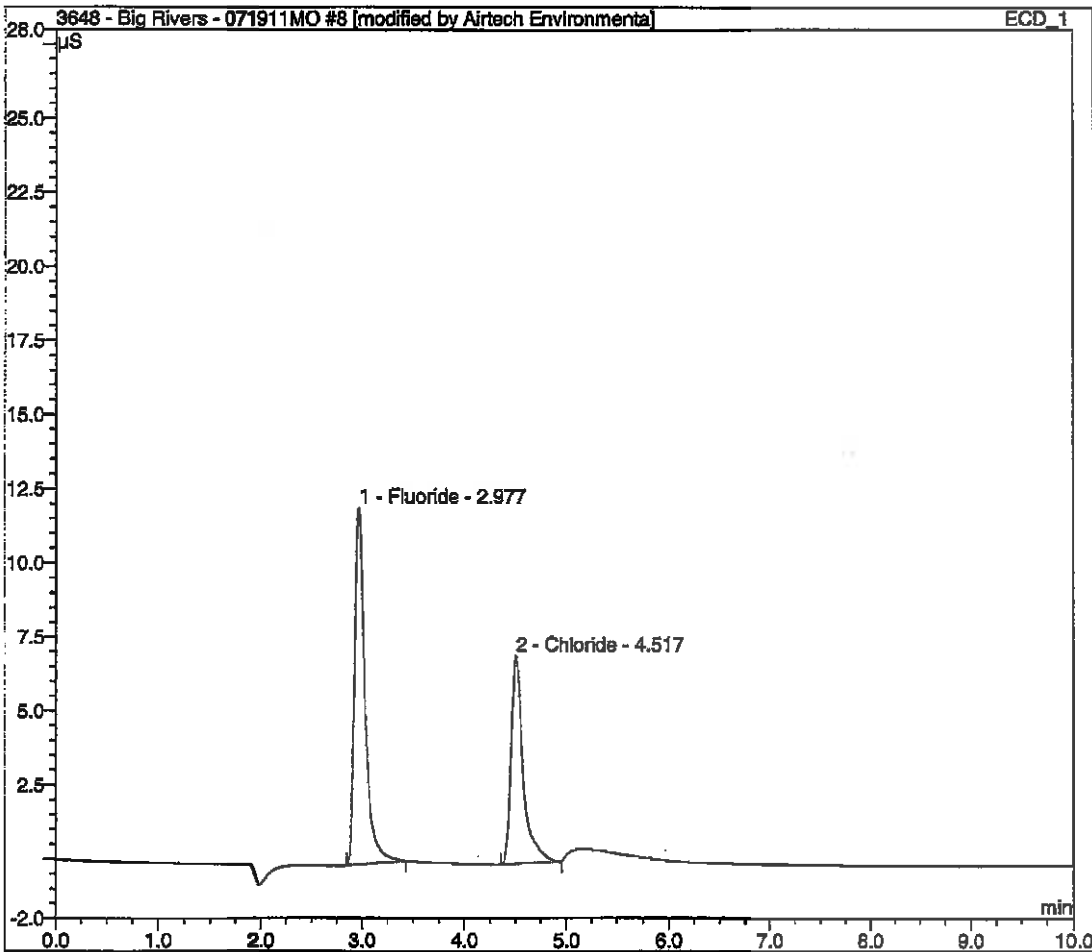
Sample Name	cal std 3 Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	7/9/11 10:58	Run Time	15.06

No.	Time min	Peak Name	Type	Area μS*min	Height μS	Amount ug/ml
1	2.98	Fluoride	BMB*	1.384	11.858	1.2753
2	4.52	Chloride	BMB*	0.957	6.966	1.2753
TOTAL:				2.34	18.82	2.55



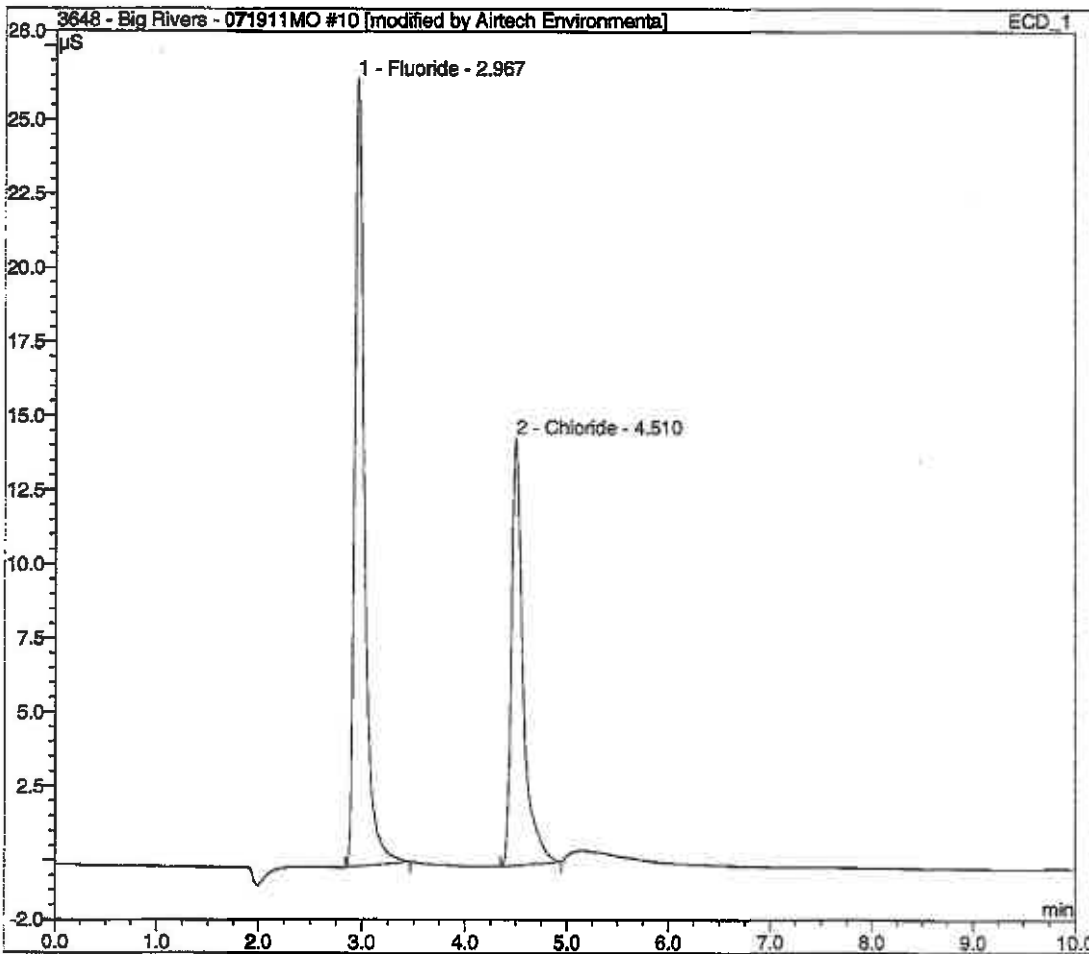
Sample Name	cal std 3 - Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	na
Inj. Date/Time	10/07/11 11:13	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.98	Fluoride	BMB*	1.407	12.036	1.2961
2	4.52	Chloride	BMB*	0.987	7.044	1.2889
TOTAL:				2.37	19.08	2.59



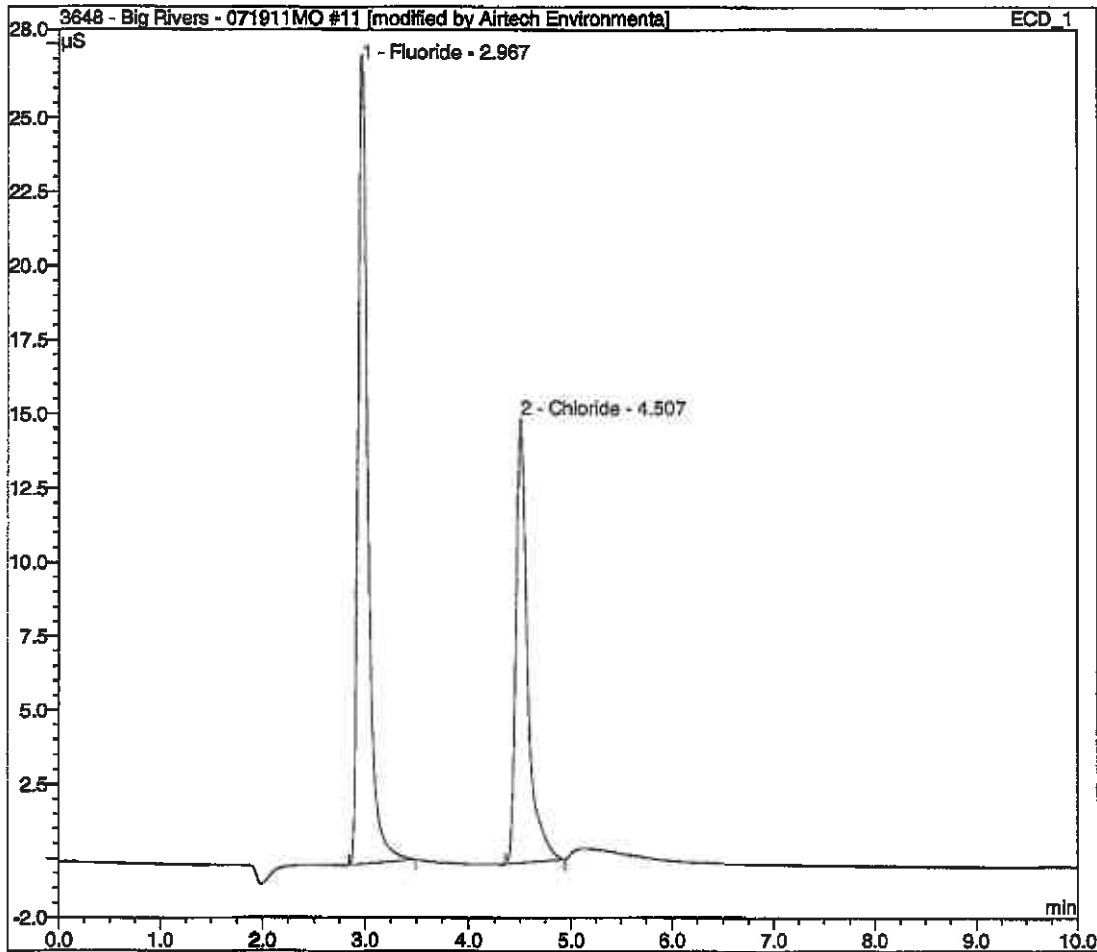
Sample Name	cal std # - Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilutor Factor	1.0000
Program	ChlorideCa	Operator	n.a.
Inj. Date/Time	19.07.11 11:44	Run Time	15:00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.97	Fluoride	BMB*	2.907	26.590	2.6784
2	4.51	Chloride	BMB*	1.939	14.424	2.5848
TOTAL:				4.85	41.01	5.26



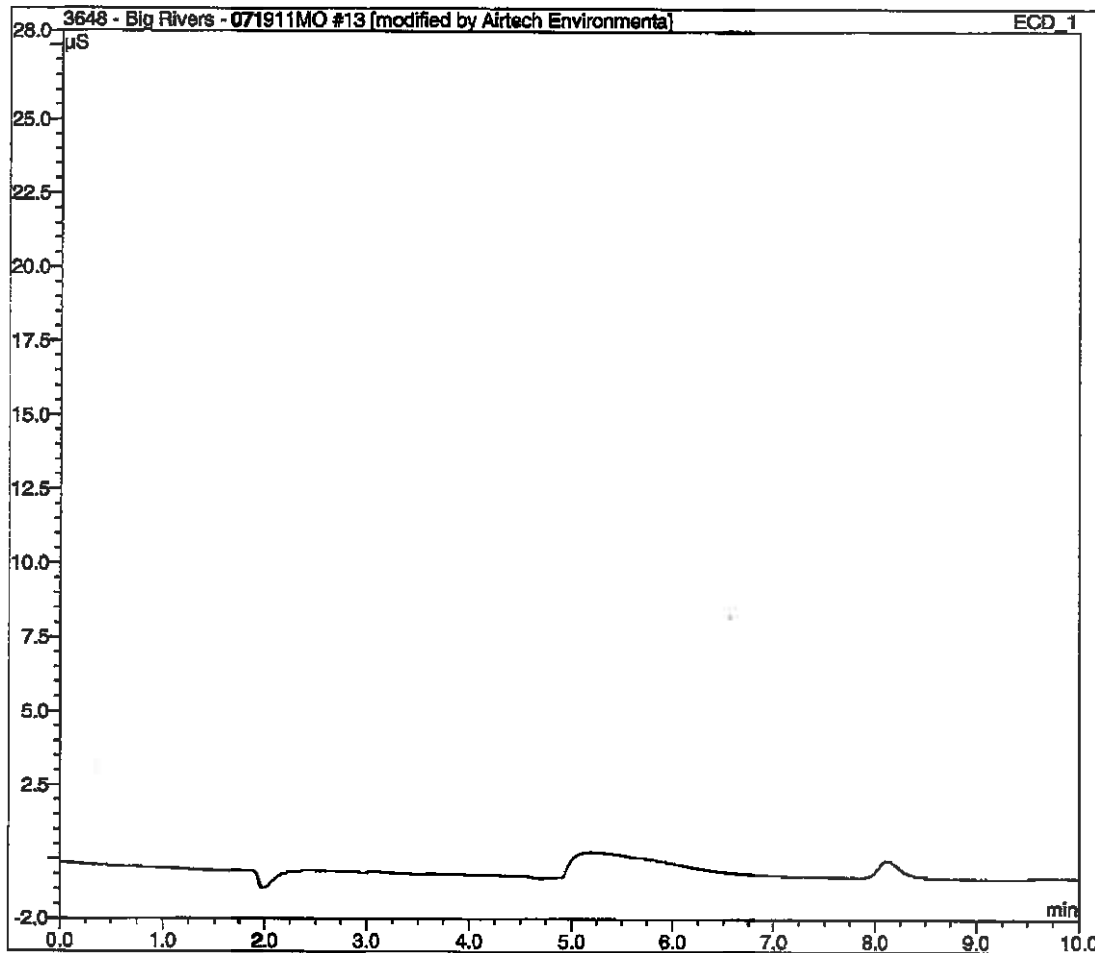
Sample Name	cal std 4 - Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	W.C.
Inj. Date/Time	19.07.11 12:00	Run Time	15:08

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.97	Fluoride	BMB*	3.013	27.347	2.5281
2	4.51	Chloride	BMB*	2.010	15.003	2.4346
TOTAL:				5.02	42.35	4.96



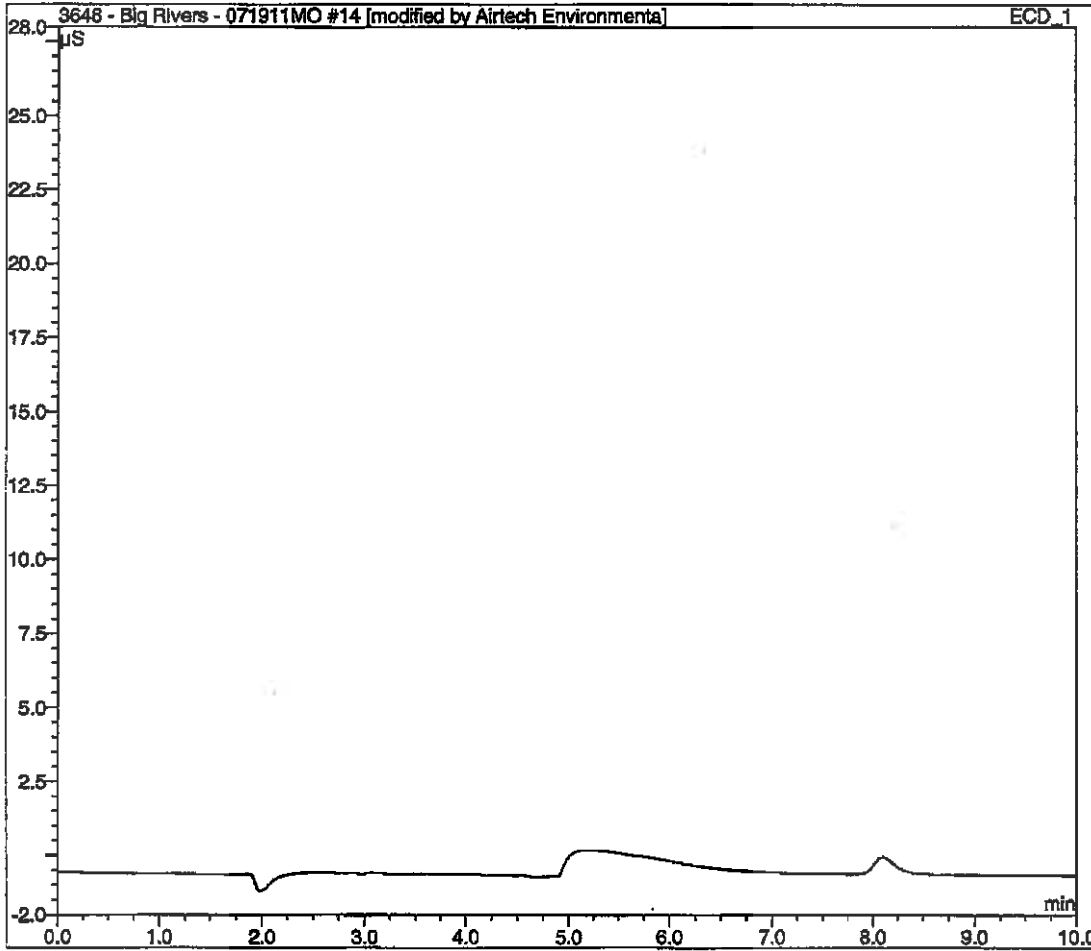
Sample Name:	Reagent Blank	Wt. Vol:	10.0
Sample Type:	Blank	Dilution Factor:	0.0000
Program:	ChlorideCal	Operator:	n.a.
Inj. Date/Time:	19.07.11 12:34	Run Time:	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
TOTAL:				0.00	0.00	0.00



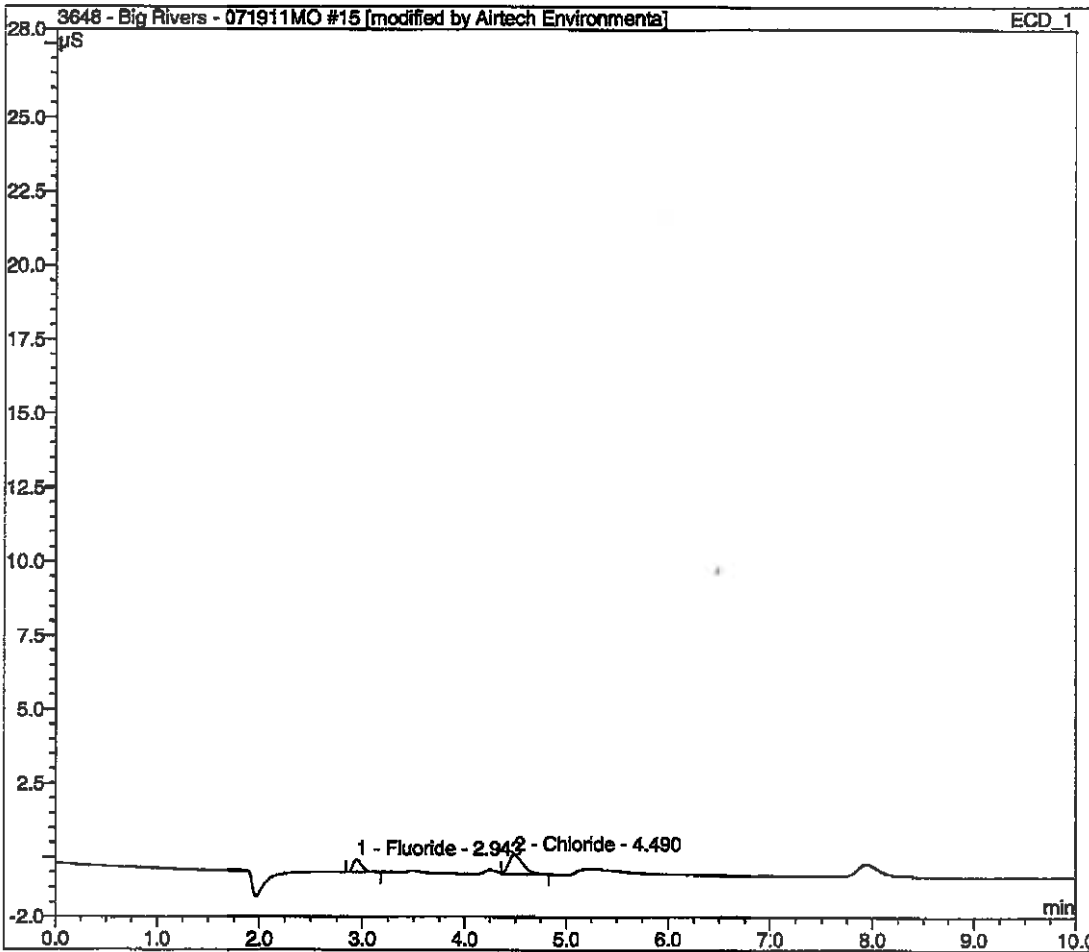
Sample Name	Reagent Blank	In. Vol	10.0
Sample Type	blank	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
In. Date/Time	19.07.11 12:49	Run Time	15:00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
TOTAL:				0.00	0.00	0.00



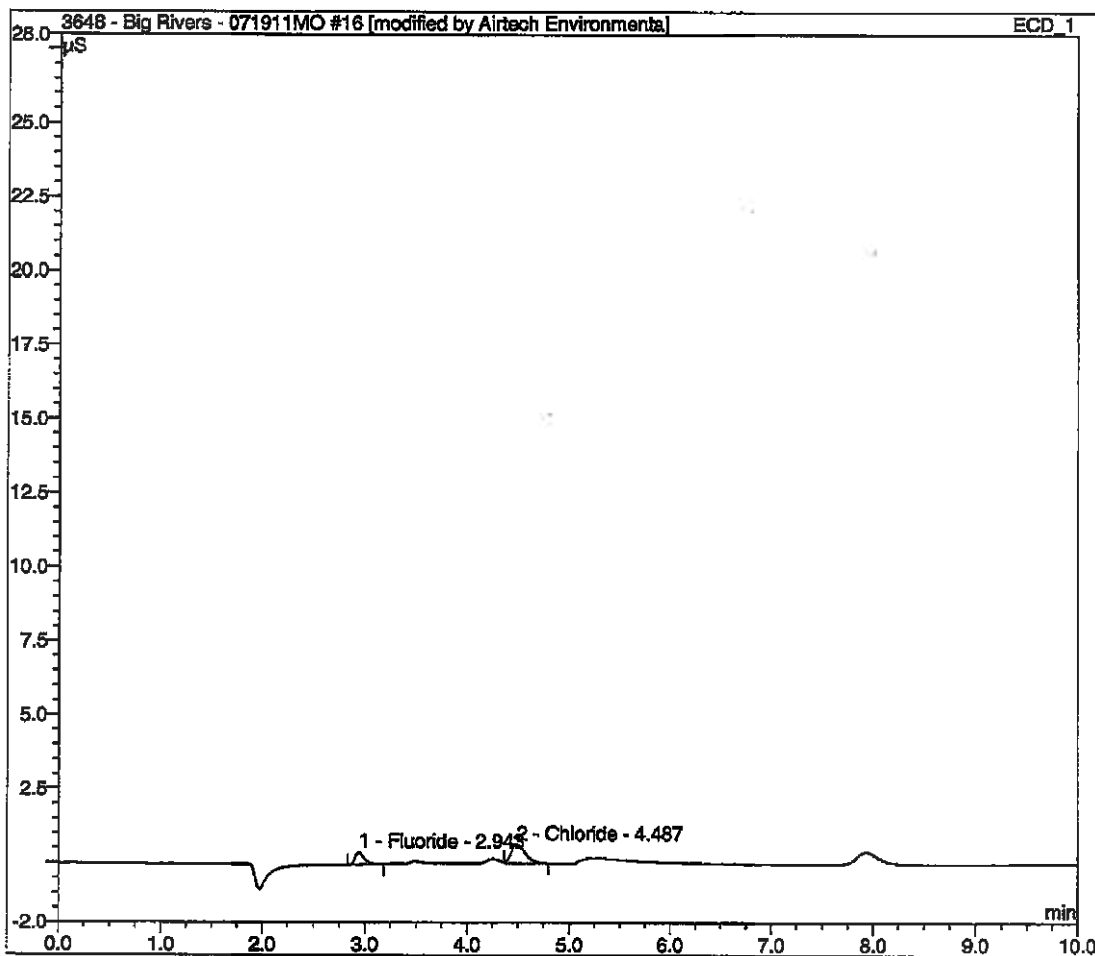
Sample Name	Common Stack - Run 1	Inj. Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCa	Operator	TJ
Inj. Date/Time	19.07.11 13:09	Run Time	3.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.94	Fluoride	BMB	0.042	0.436	0.0361
2	4.49	Chloride	MB*	0.106	0.648	0.1301
TOTAL:				0.15	1.08	0.17



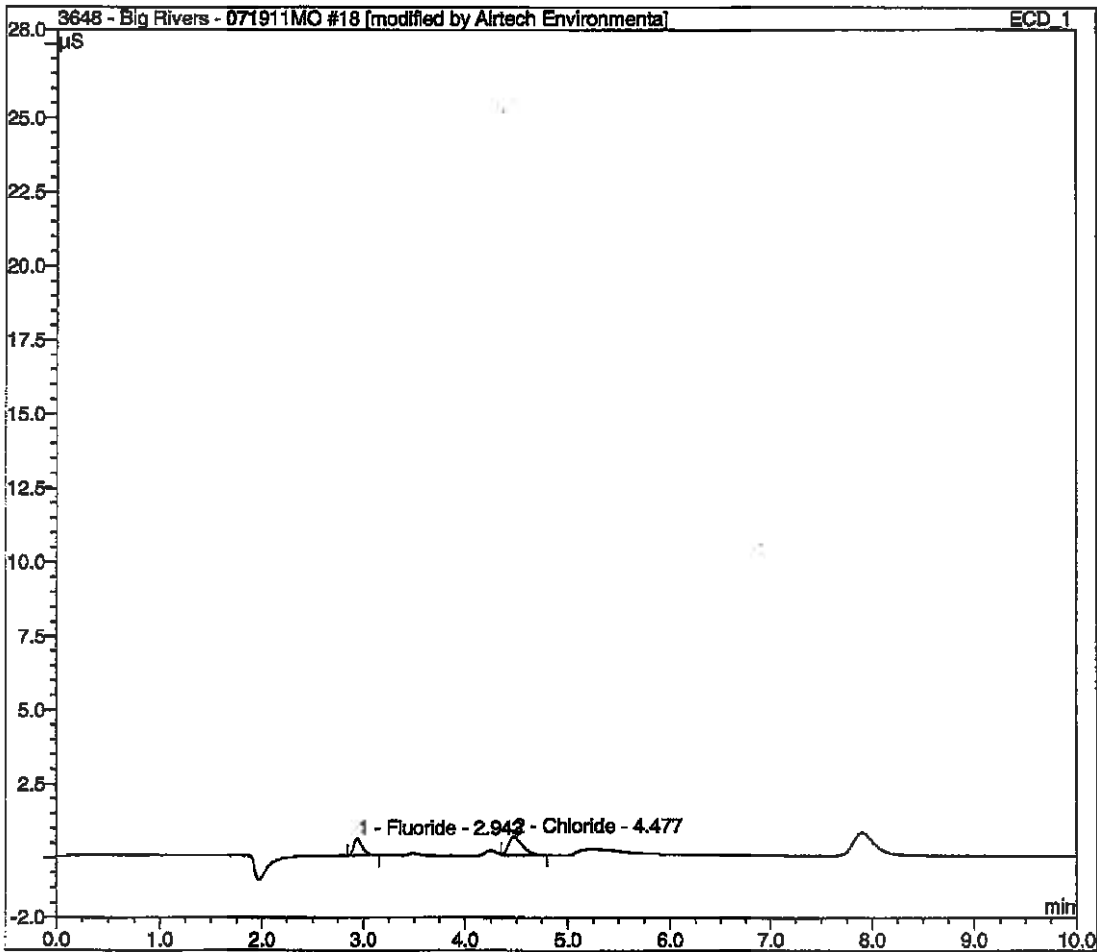
Sample Name	Common Stack - Run 1	Inj. Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	Chloride.Cal	Operator	n.a.
Wj Date/Time	19.07.11 13:25	Run Time	15.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µmol
1	2.94	Fluoride	BMB	0.042	0.430	0.0358
2	4.49	Chloride	MB*	0.106	0.653	0.1303
TOTAL:				0.15	1.08	0.17



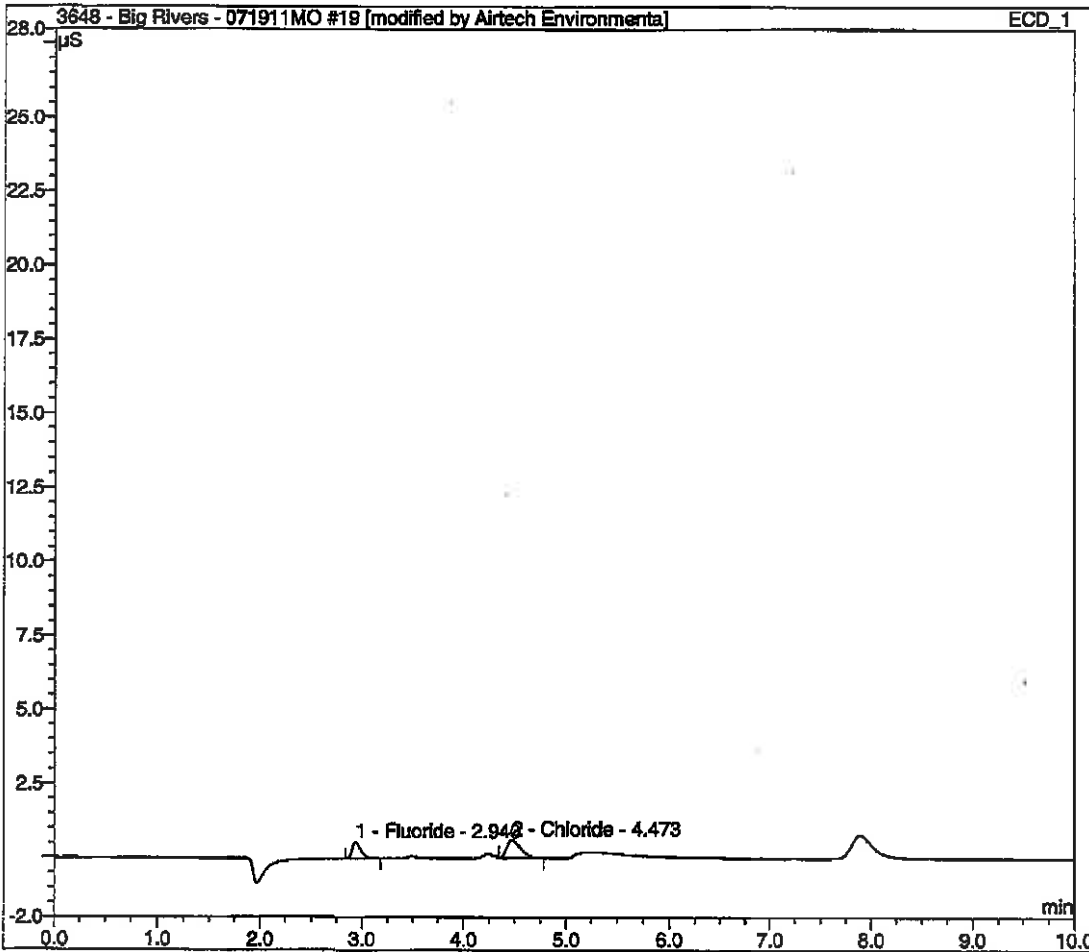
Sample Name:	Common Stack - Run 2	Inj. Vol:	10.0
Sample Type:	unknown	Dilution Factor:	1.0000
Program:	ChlorideCal	Operator:	n.a.
Inj. Date/Time:	19.07.11 13:58	Run Time:	15:00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/gal}$
1	2.94	Fluoride	BMB*	0.055	0.569	0.0471
2	4.48	Chloride	MB*	0.101	0.625	0.1243
TOTAL:				0.16	1.19	0.17



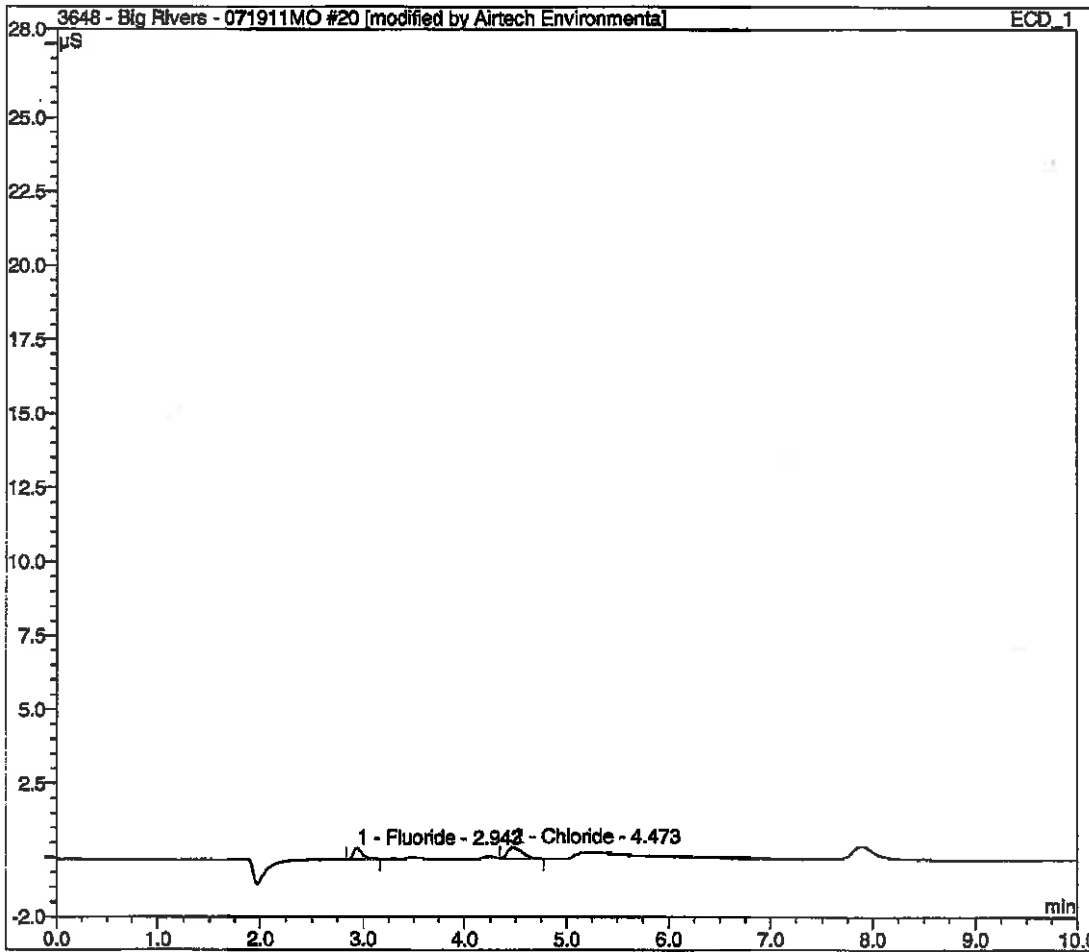
Sample Name	Common Stack - Rurt 2	Inj. Vol.	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	Chloride.C	Operator	n.a.
Inj. Date/Time	19.07.11 14:14	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{mol/L}$
1	2.94	Fluoride	BMB	0.065	0.568	0.0471
2	4.47	Chloride	MB*	0.099	0.621	0.1220
TOTAL:				0.15	1.19	0.17



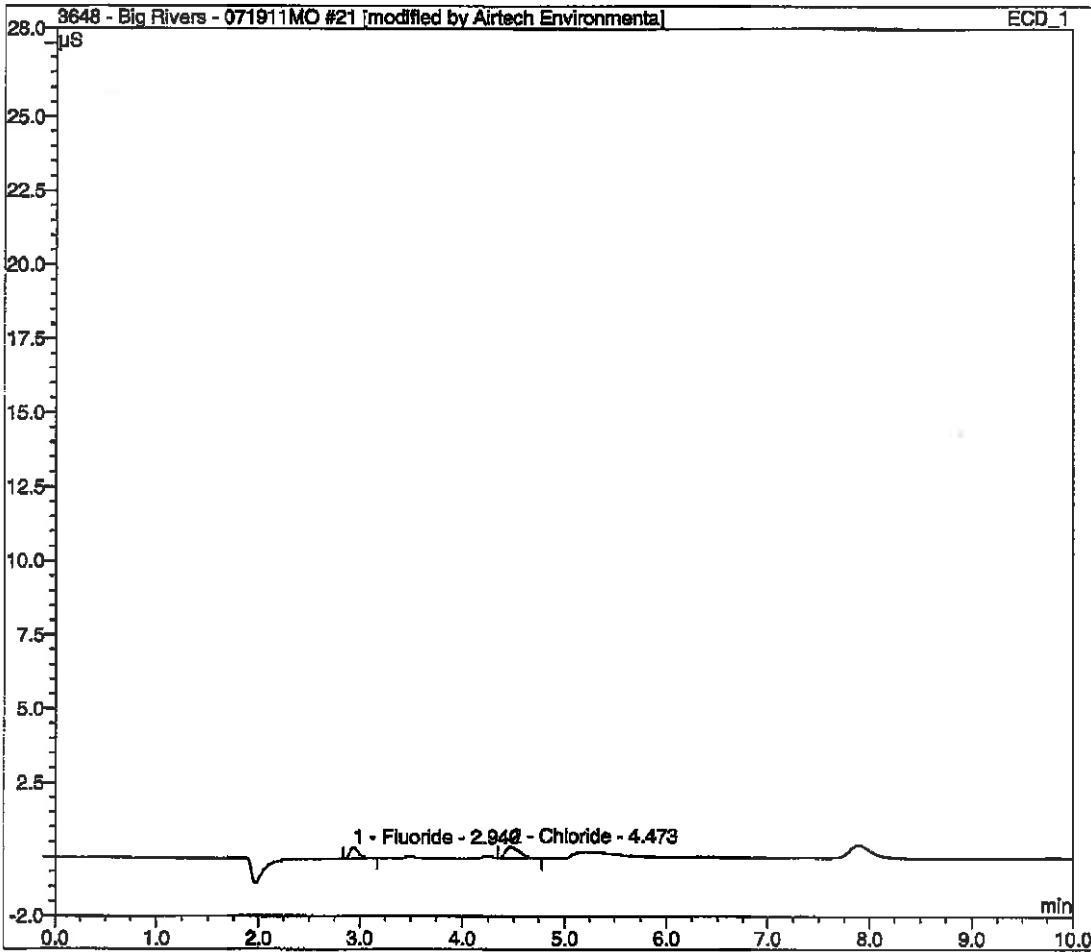
Sample Name	Common Stack - Run 3	Inj. Vol.	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	19:07:11 7/22/11	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.94	Fluoride	BMB	0.036	0.371	0.0309
2	4.47	Chloride	MB*	0.065	0.388	0.0797
TOTAL:				0.10	0.76	0.11



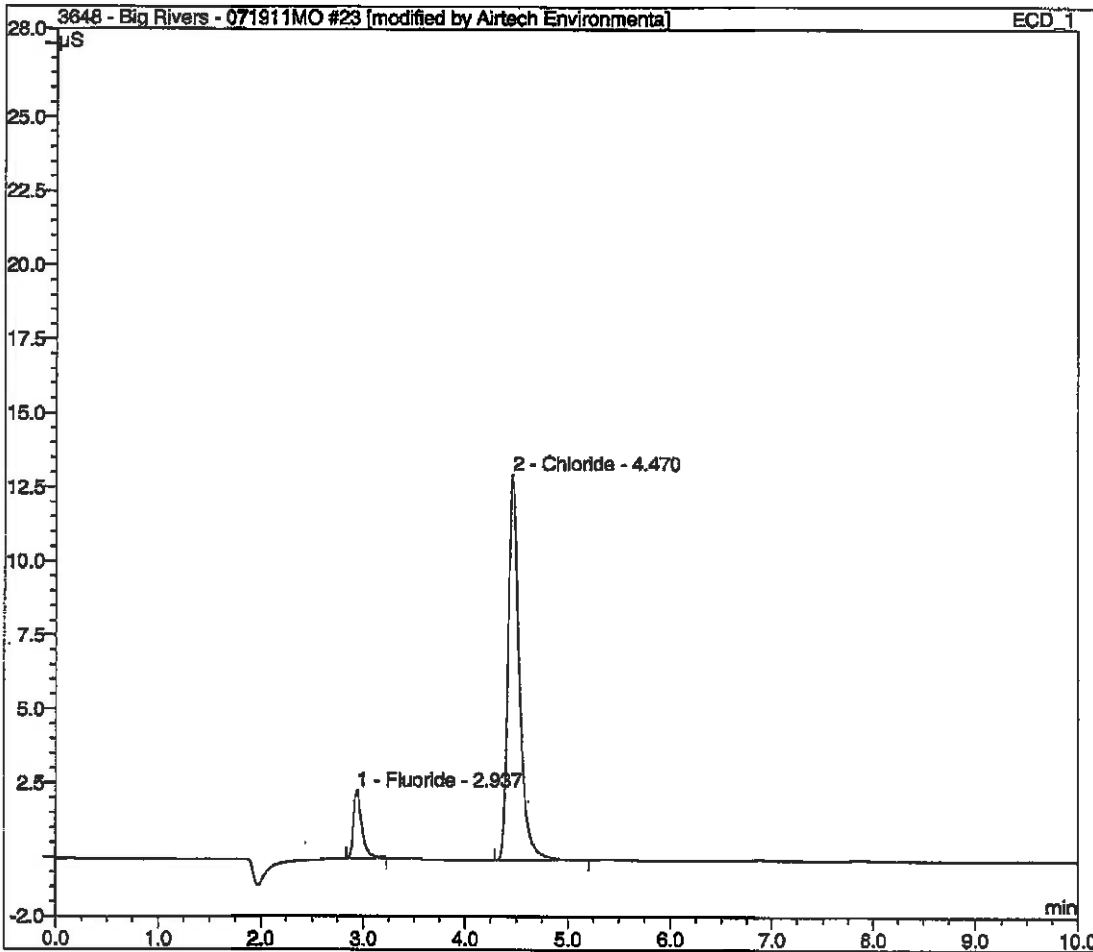
Sample Name	Common Stack - Run 3	Inj Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCat	Operator	n.a.
Inj. Date/Time	19.07.11 11:50	Run Time	15.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
1	2.94	Fluoride	BMB	0.036	0.370	0.0307
2	4.47	Chloride	MB*	0.065	0.391	0.0804
TOTAL:				0.10	0.76	0.11



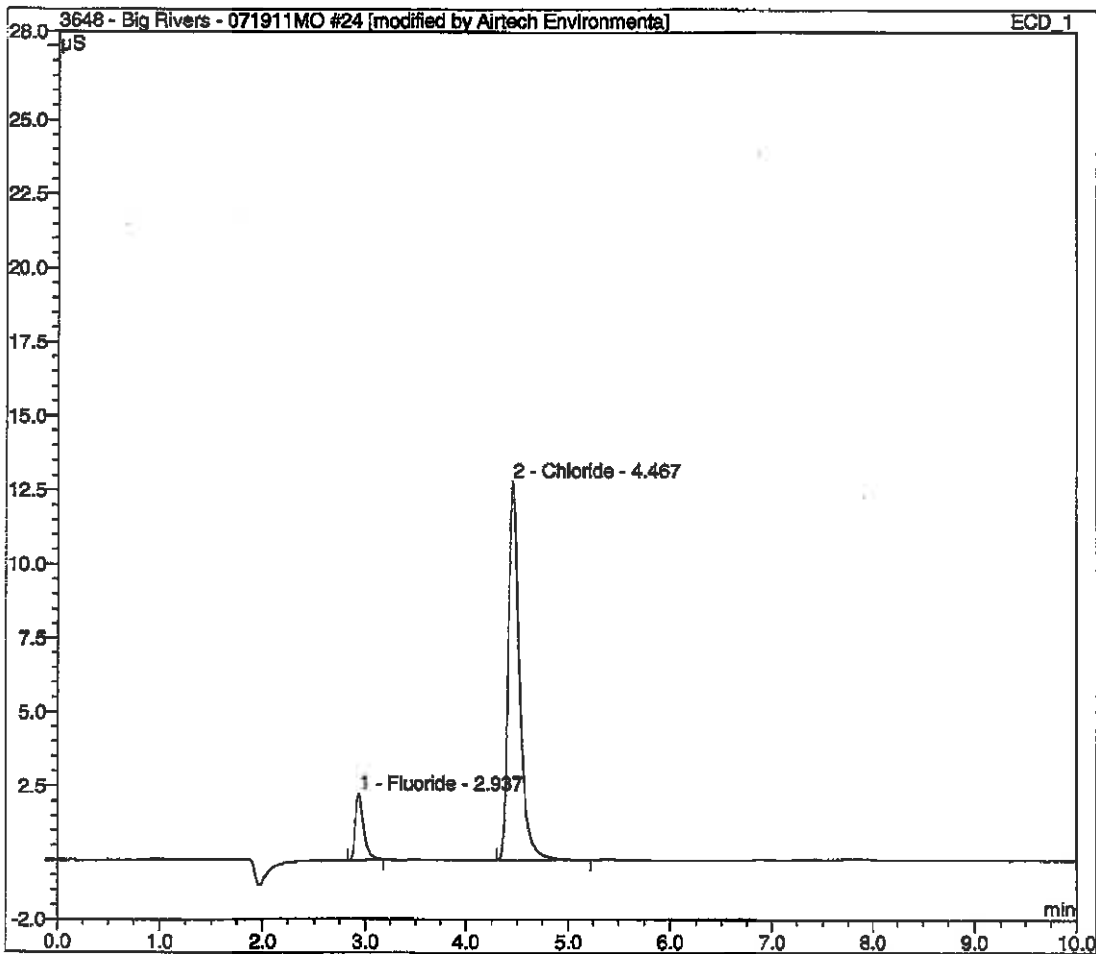
Sample Name	EST Exhaust Unit 1 - Run 1 (2 ml Sample to 50 ml DI)	Inj. Vol.	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	Chloride Cal	Operator	n.a.
Inj. Date/Time	10/07/11 15:22	Run Time	15:00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
1	2.94	Fluoride	BMB*	0.219	2.290	0.1882
2	4.47	Chloride	BMB*	1.690	13.051	2.0789
TOTAL:				1.91	15.34	2.27



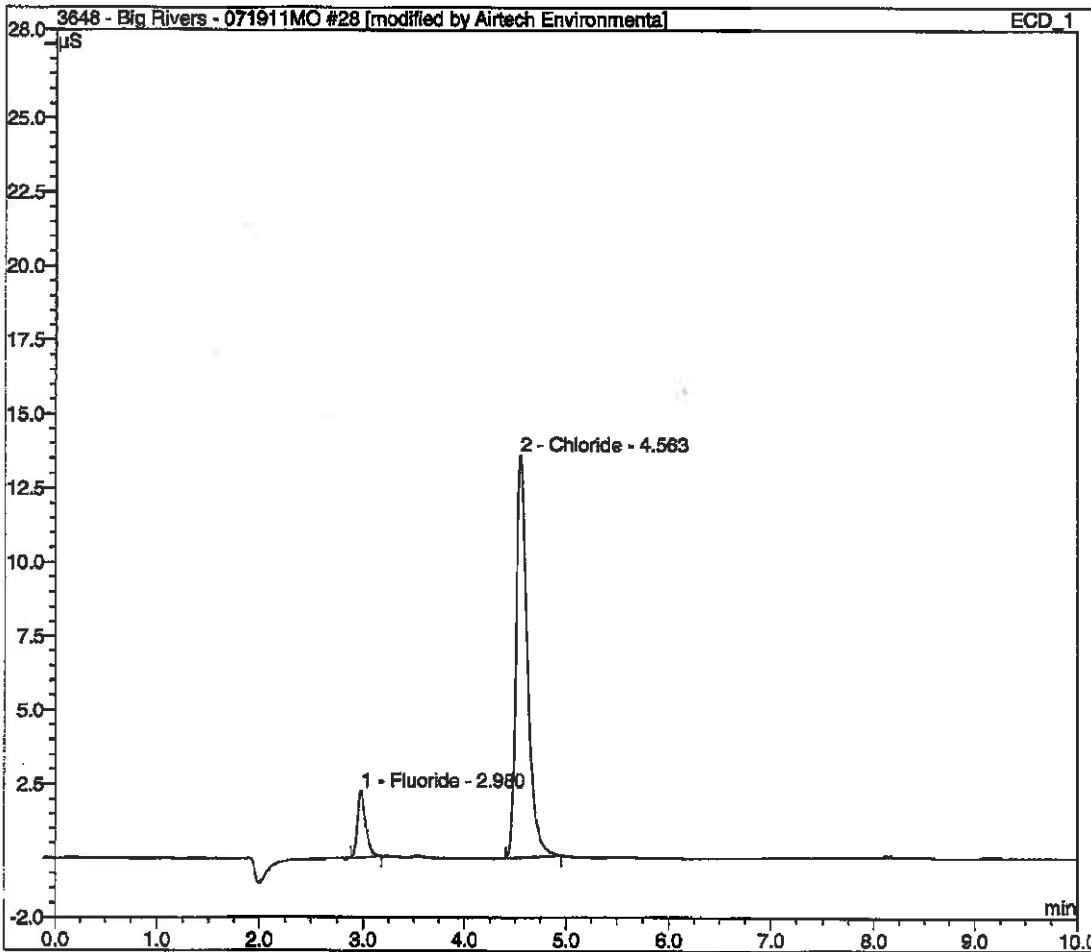
Sample Name	EST Exhaust Unit 1 - Run 1 (2 ml Sample to 50 ml DI H ₂ O)	Inj Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCa	Operator	n.a.
Inj Date/Time	19.07.11 15:40	Run Time	15.00

No.	Time (min)	Peak Name	Type	Area (µS*min)	Height (µS)	Amount (µmol)
1	2.94	Fluoride	BMB*	0.210	2.236	0.1809
2	4.47	Chloride	BMB*	1.656	12.804	2.0370
TOTAL:				1.87	15.04	2.22



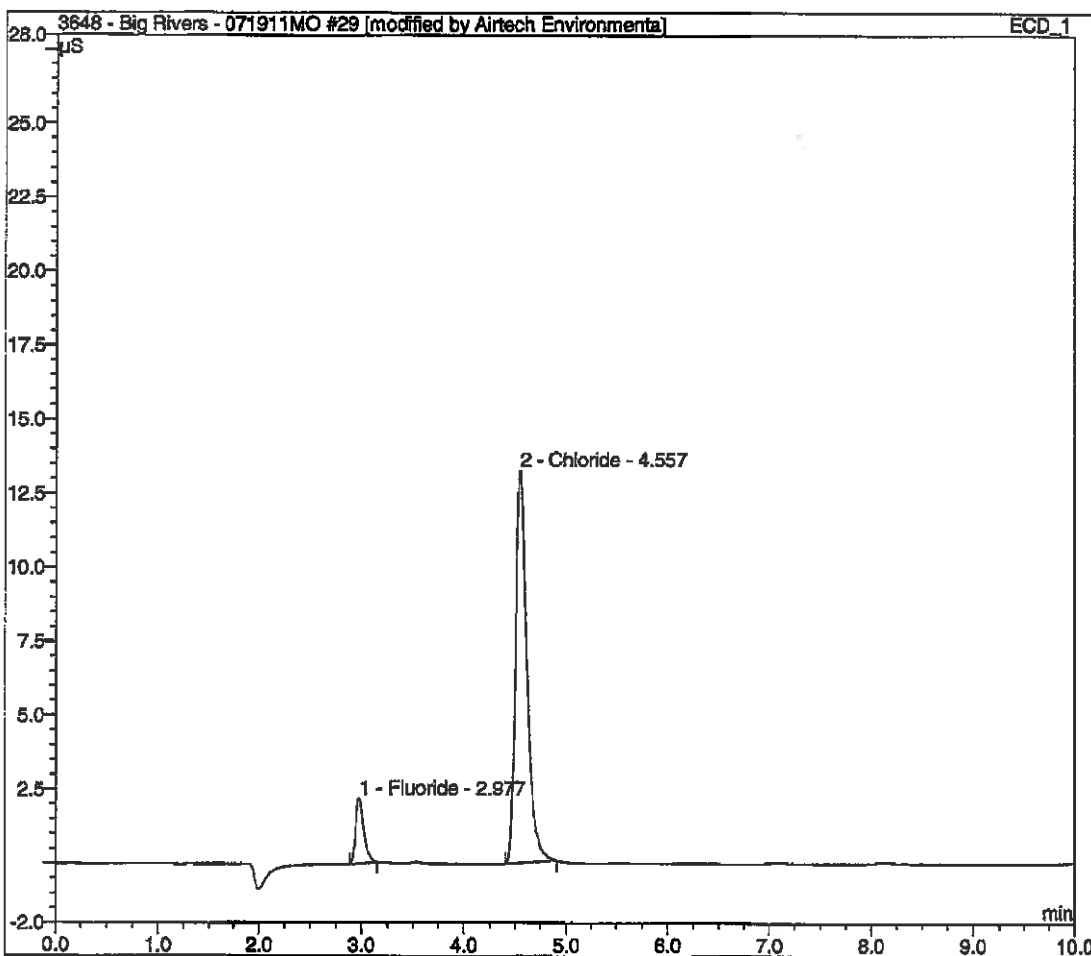
Sample Name	EST Exhaust Unit 1 - Run 2 (2 ml Sample to 50 ml DI)	Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCat	Operator	na
Inj. Date/Time	20.07.11 10:40	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount μmol
1	2.96	Fluoride	BMB*	0.213	2.251	0.1828
2	4.56	Chloride	BMB*	1.771	13.592	2.1787
TOTAL:				1.98	15.84	2.36



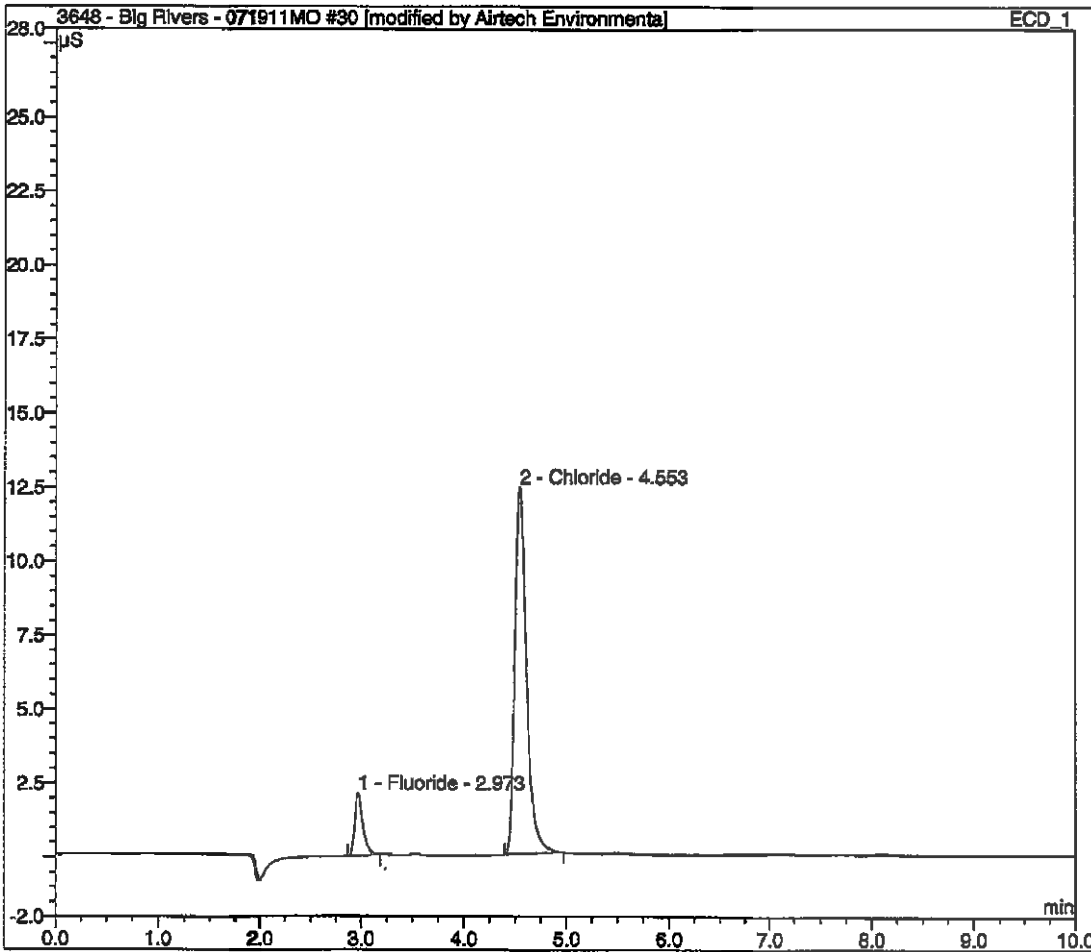
Sample Name	EST Exhaust Unit 1 - Run 2 (2 ml Sample to 50 ml DI Inj Vol)	Inj Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCal	Operator	jsa
Inj Date/Time	20.07.11 10:56	Run Time	15.00

No.	Time (min)	Peak Name	Type	Area (µS min)	Height (µS)	Amount (µg/ml)
1	2.98	Fluoride	BMB*	0.204	2.195	0.1756
2	4.56	Chloride	BMB*	1.712	13.249	2.1065
TOTAL:				1.92	15.44	2.28



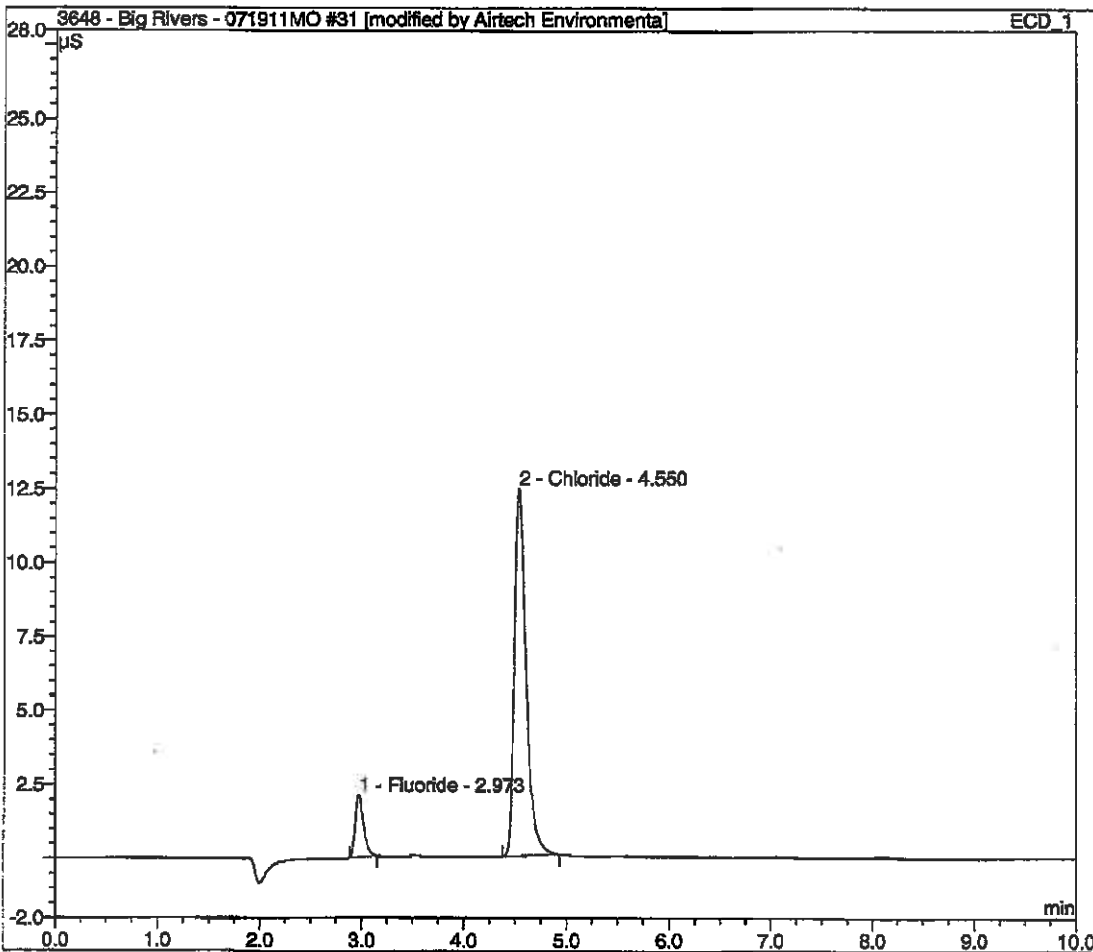
Sample Name:	EST Exhaust Unit 1 - Run 3 (2 ml Sample to 50 ml DI Inj. Vol)	Inj. Vol:	10.0
Sample Type:	unknown	Dilution Factor:	1.0000
Program:	ChlorideCal	Operator:	n.a.
Inj. Date/Time:	20.07.11. 11:11	Run Time:	15.00

No.	Time (min)	Peak Name	Type	Area (µS*min)	Height (µS)	Amount (µg/ml)
1	2.97	Fluoride	BMB*	0.199	2.100	0.1712
2	4.55	Chloride	BMB*	1.616	12.379	1.9882
TOTAL:				1.82	14.48	2.16



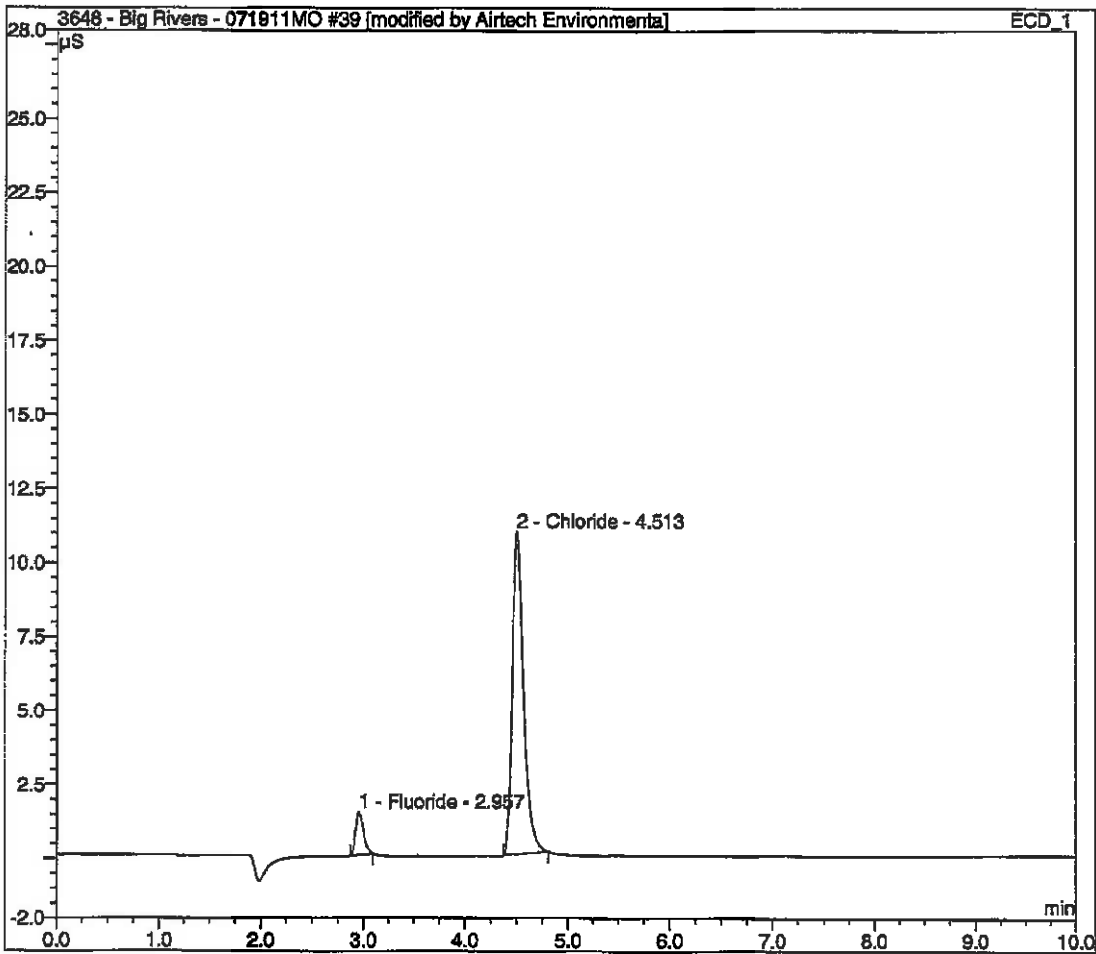
Sample Name	EST Exhaust Unit 1 - Run 3 (2 ml Sample to 50 ml DI H ₂ O)	Vol	10.0
Sample Type	Unknown	Dilution Factor	1.0000
Program	Chloride Cal	Operator	n.a.
Inj. Date/Time	20.07.11 11:31	Run Time	45.00

No.	Time (min)	Peak Name	Type	Area (µS·min)	Height (µS)	Amount (µmol)
1	2.97	Fluoride	BMB*	0.194	2.087	0.1689
2	4.55	Chloride	BMB*	1.613	12.406	1.9837
TOTAL:				1.81	14.49	2.15



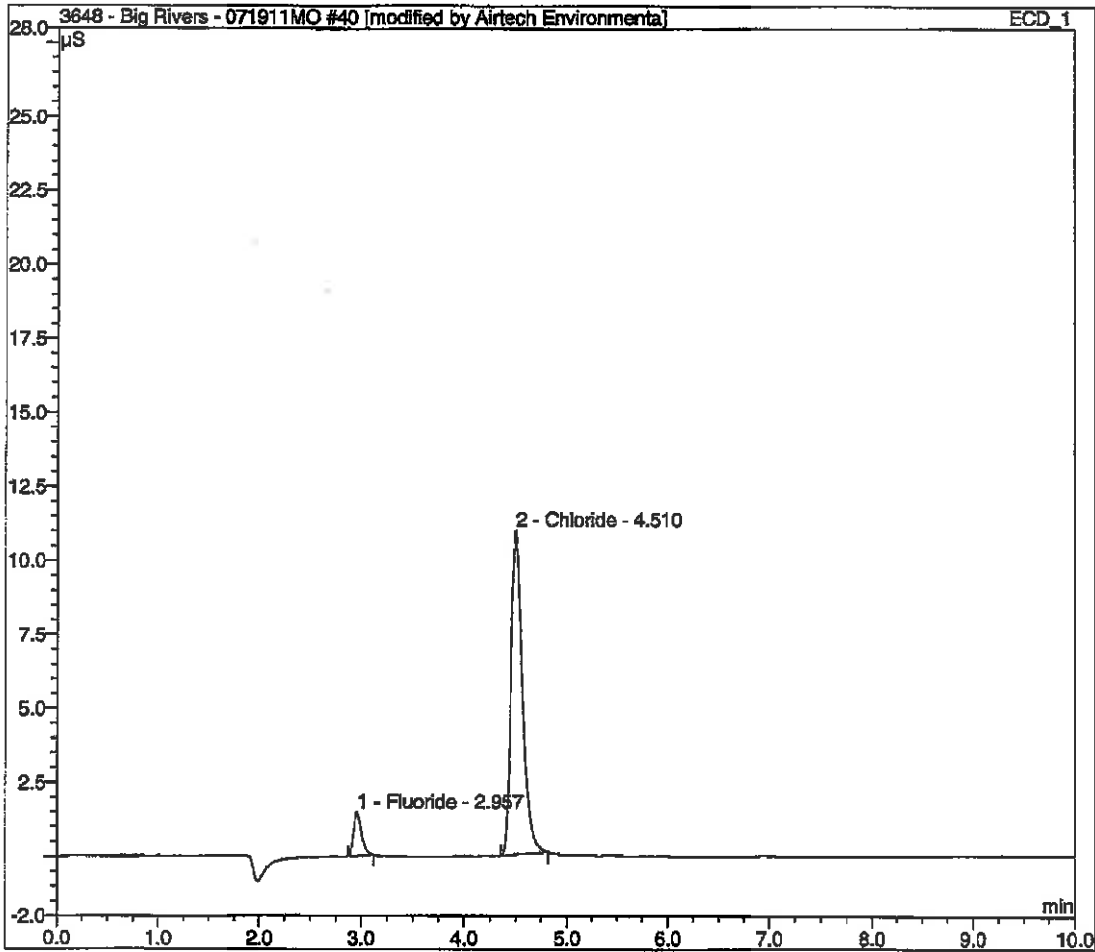
Sample Name	EST Exhaust Unit 2 - Run 1 (2 ml Sample to 100 ml C In)	Vol	10.0
Sample Type	Unknown	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Log Date/Time	20.07.11 13:55	Run Time	5:20

No.	Time (min)	Peak Name	Type	Area (µS*min)	Height (µS)	Amount (µg/ml)
1	2.96	Fluoride	BMB*	0.130	1.460	0.1118
2	4.51	Chloride	BMB*	1.382	10.885	1.7001
TOTAL:				1.51	12.34	1.81



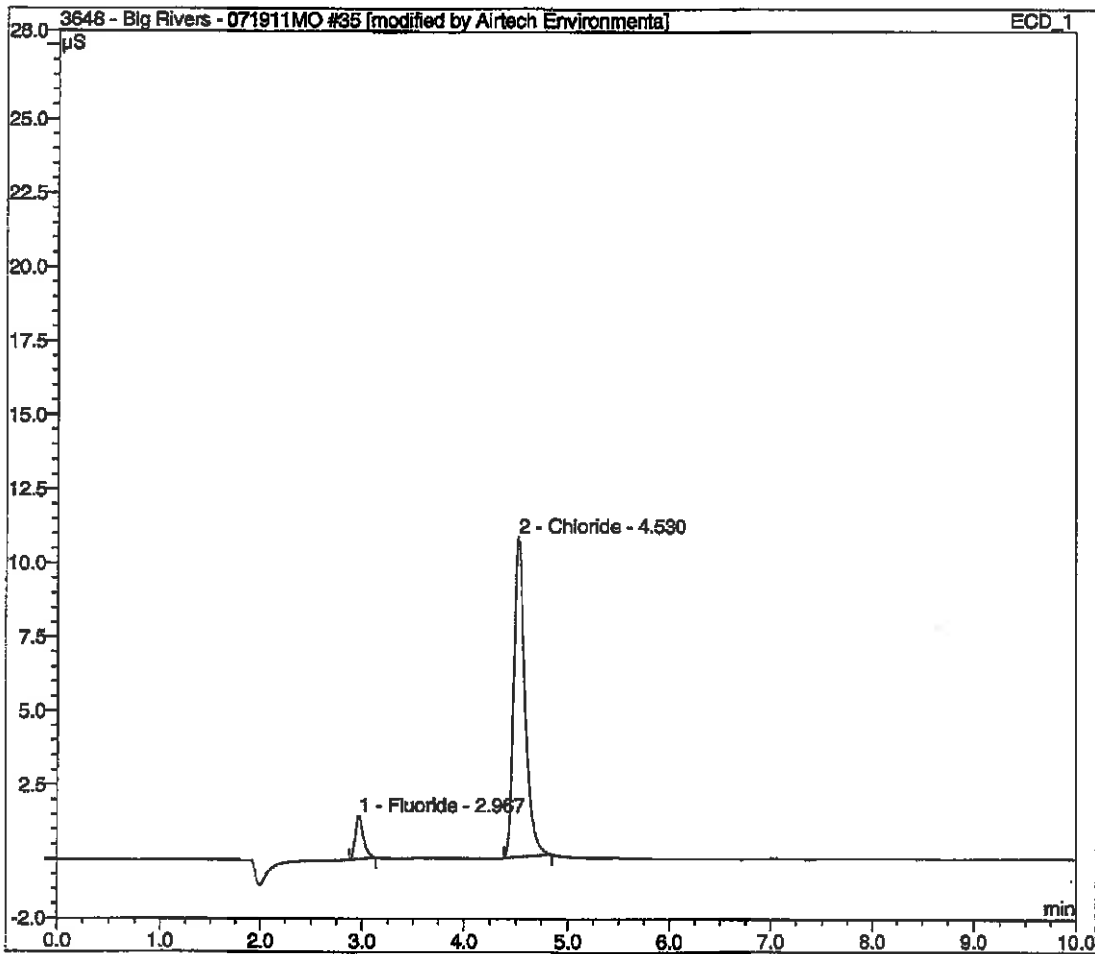
Sample Name	EST Exhaust Unit 2 - Run 1 (2 ml Sample to 100 ml C in 1/6)	10.0
Sample Type	Unknown	Dilution Factor 1.0000
Program	ChlorideCal	Operator n.a.
Inj. Date/Time	20.07.11 14:26	Run Time 15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S}\cdot\text{min}$	Height μS	Amount ng/ml
1	2.96	Fluoride	BMB*	0.134	1.477	0.1153
2	4.51	Chloride	BMB*	1.391	10.955	1.7116
TOTAL:				1.53	12.43	1.83



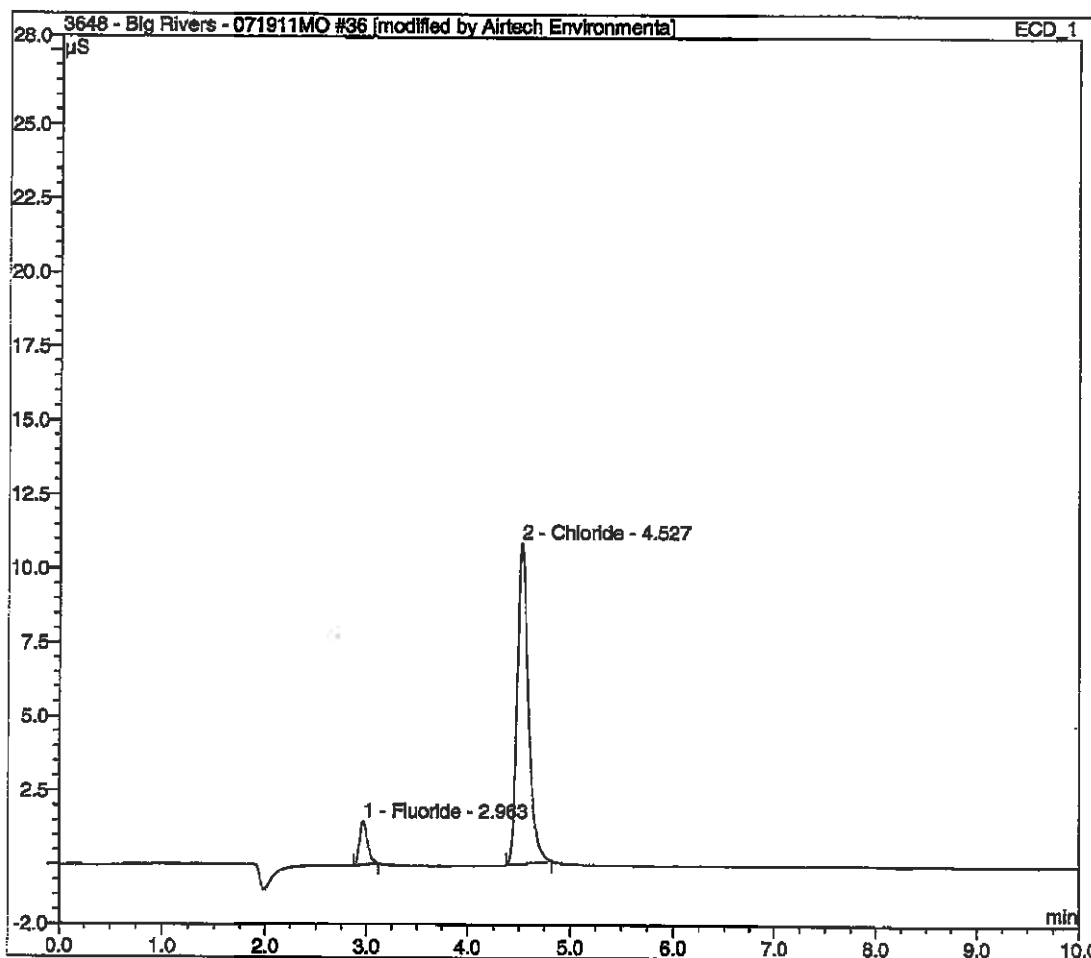
Sample Name	EST Exhaust Unit 2 - Run 2	Inj. Vol.	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCa	Operator	n.a
Inj. Date/Time	20.07.11. 12:38	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S min}$	Height μS	Amount μgrams
1	2.97	Fluoride	BMB*	0.134	1.465	0.1154
2	4.53	Chloride	BMB*	1.384	10.809	1.7025
TOTAL:				1.52	12.27	1.82



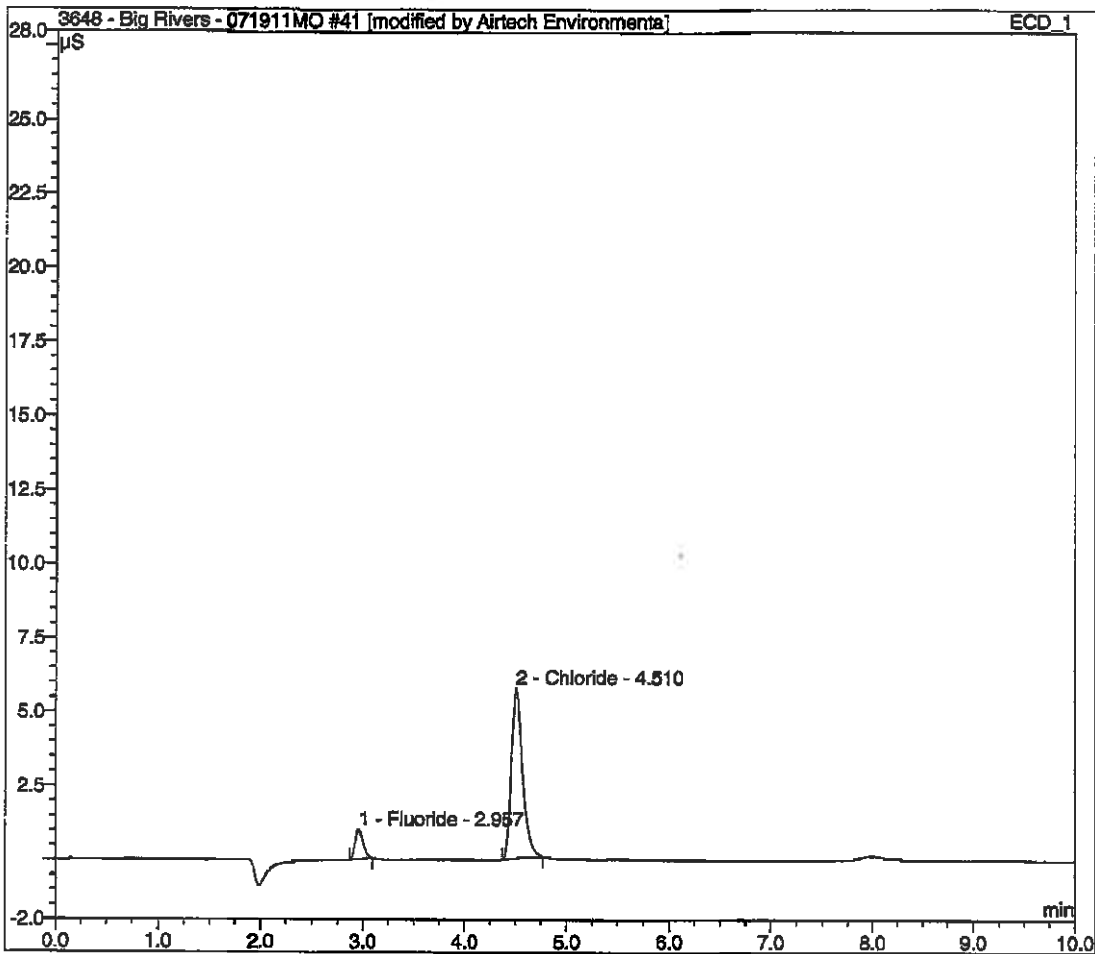
Sample Name	EST Exhaust Unit 2 - Run 2 (2 ml Sample to 50 ml DI Inj Vol)	Inj Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCa	Operator	n.a.
Inj Date/Time	20.07.11 12:59	Run Time	15.00

No.	Time min	Peak Name	Type	Area µS min	Height µS	Amount µg/ml
1	2.96	Fluoride	BMB*	0.133	1.467	0.1144
2	4.53	Chloride	BMB*	1.382	10.836	1.6997
TOTAL:				1.51	12.30	1.81



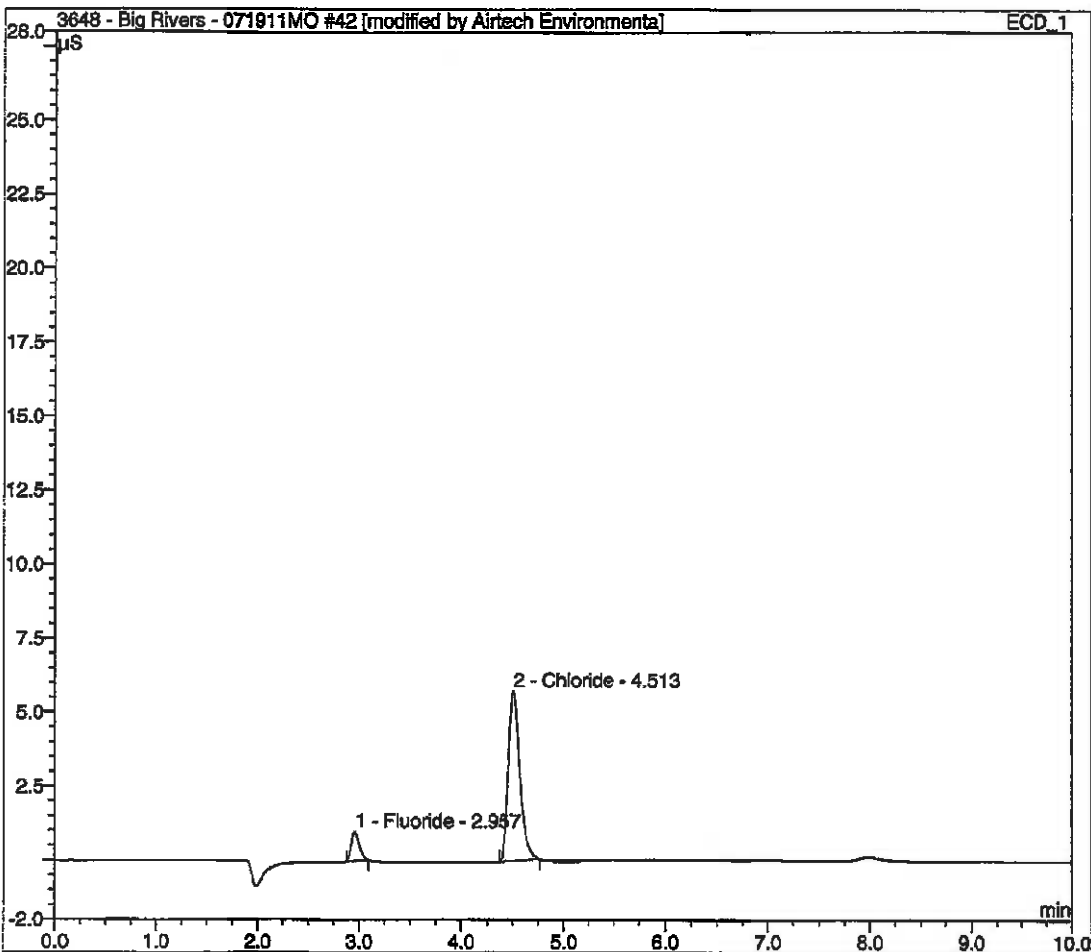
Sample Name	EST Exhaust Unit 2 - Run 3 (2 ml Sample to 100 ml C ₁ V ₁)	10.0
Sample Type	Unknown	Dilution Factor: 1.0000
Program	ChlorideCa	Operator: n.a.
Injection Date/Time	20.07.11 14:43	Run Time: 15:00

No.	Time (min)	Peak Name	Type	Area (nS*min)	Height (uS)	Amount (ug/ml)
1	2.96	Fluoride	BMB*	0.089	0.998	0.0766
2	4.51	Chloride	BMB*	0.732	5.757	0.9005
TOTAL:				0.82	6.75	0.98



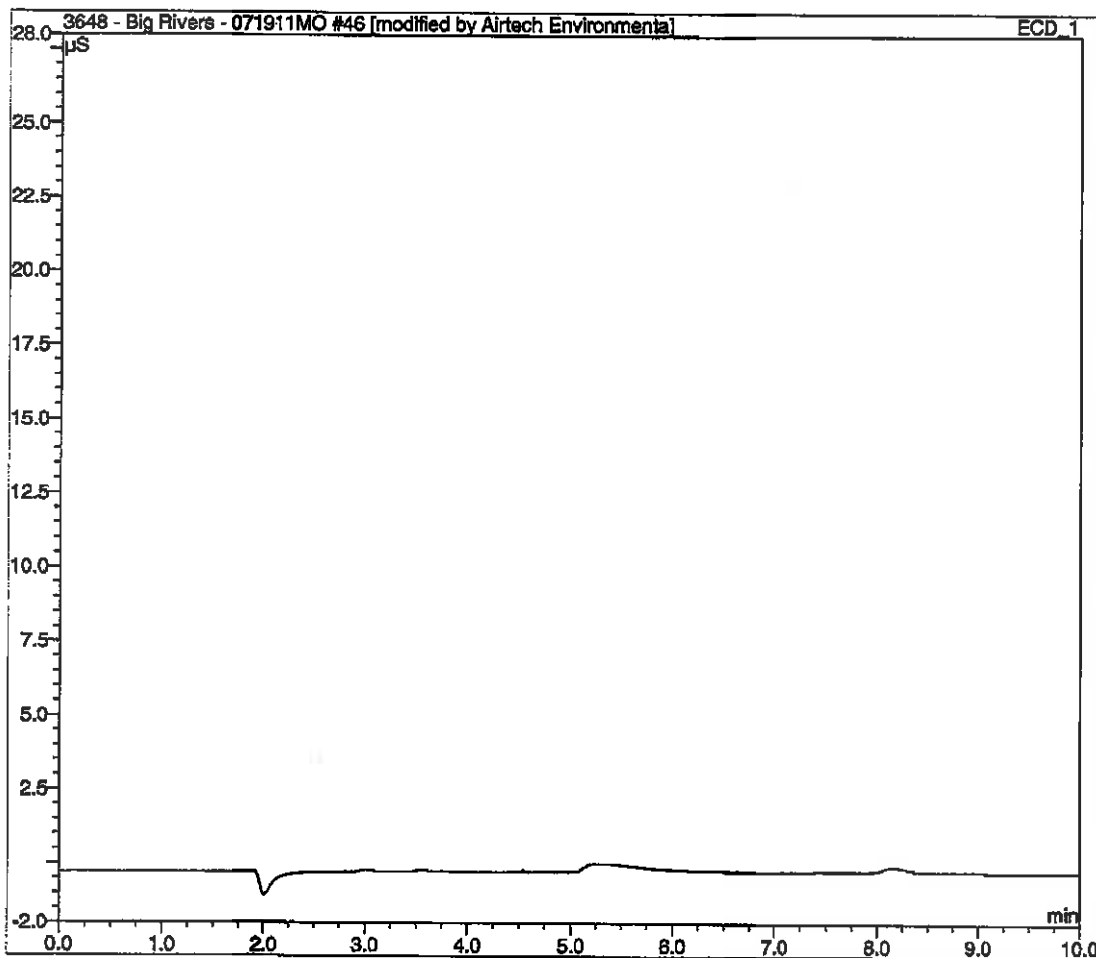
Sample Name	EST Exhaust Unit 2 - Run 2 (2 ml Sample to 100 ml C Inj. vol)	10.0
Sample Type	unknown	Dilution Factor 1.0000
Program	ChlorideCal	Operator n.a.
Inj. Date/Time	20.07.11 15:02	Run Time 15:00

No.	Time (min)	Peak Name	Type	Area (µS*min)	Height (µS)	Amount (ug/ml)
1	2.96	Fluoride	BMB*	0.087	0.989	0.0752
2	4.51	Chloride	BMB*	0.730	5.736	0.8974
TOTAL:				0.82	6.73	0.97



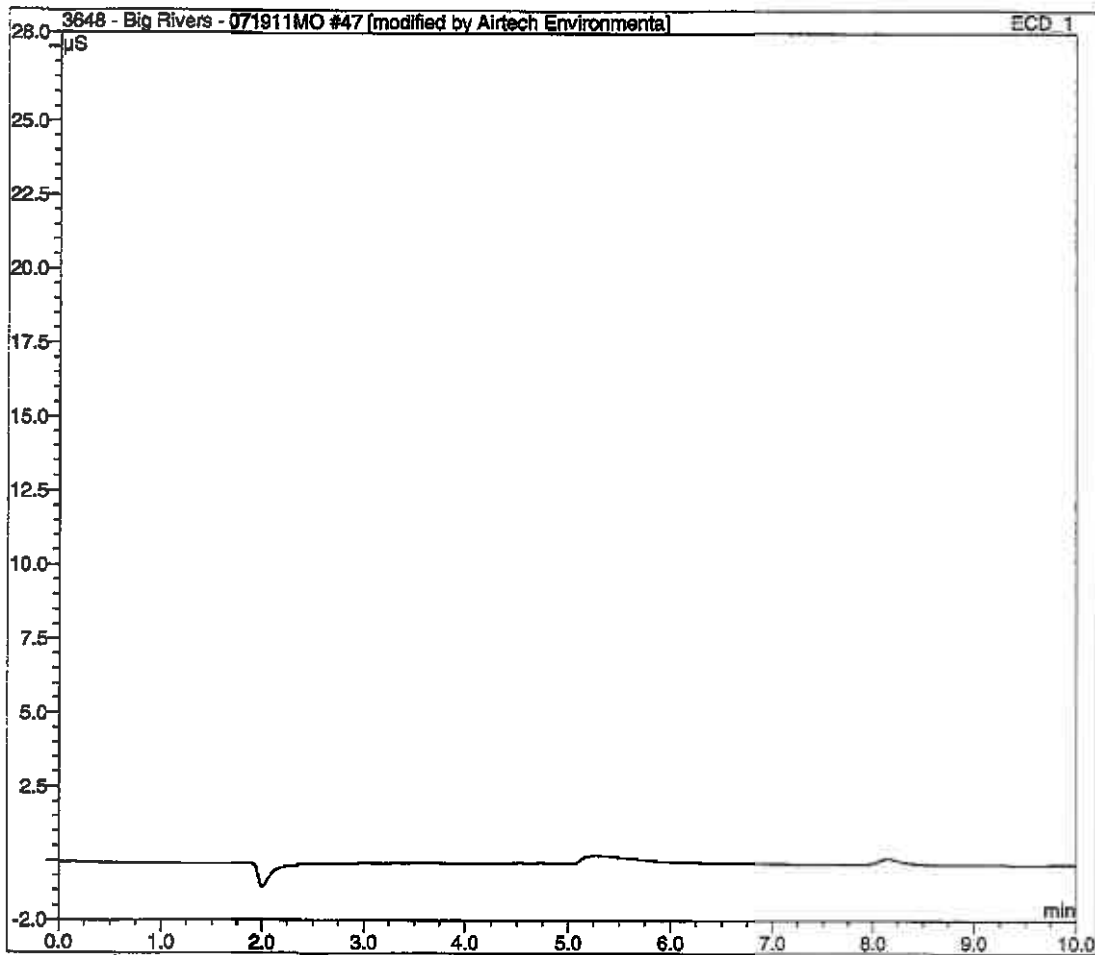
Sample Name:	EST Exhaust Unit 3 - Run 1	Inj. Vol:	10.0
Sample Type:	unknown	Dilution Factor:	1.0000
Program:	ChlorideCal	Operator:	n.a.
Inj. Date/Time:	21.07.11 11:32	Run Time:	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
TOTAL:				0.00	0.00	0.00



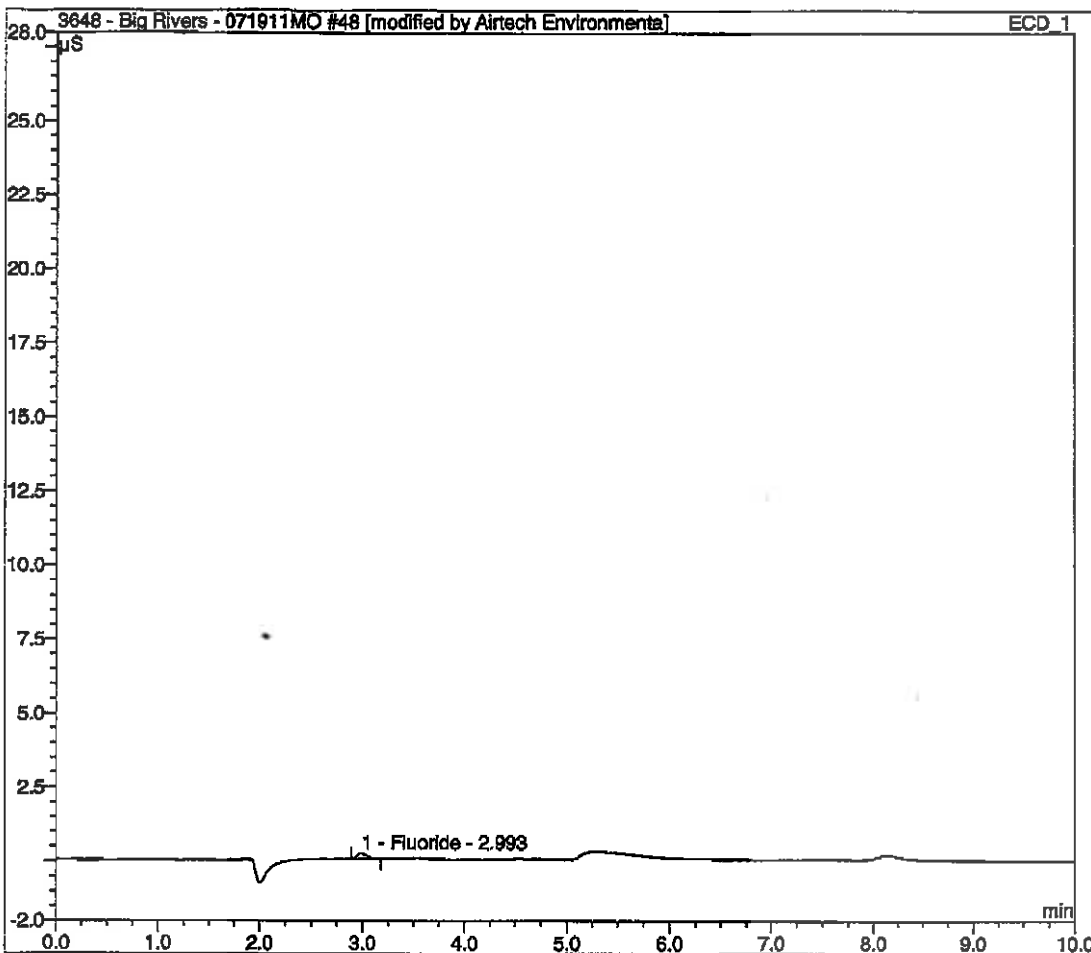
Sample Name	EST Exhaust Unit 3 - Run 1	Inj. Vol.	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	21-07-11 11:58	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S}\cdot\text{min}$	Height μS	Amount $\mu\text{g}/\text{ml}$
TOTAL:				0.00	0.00	0.00



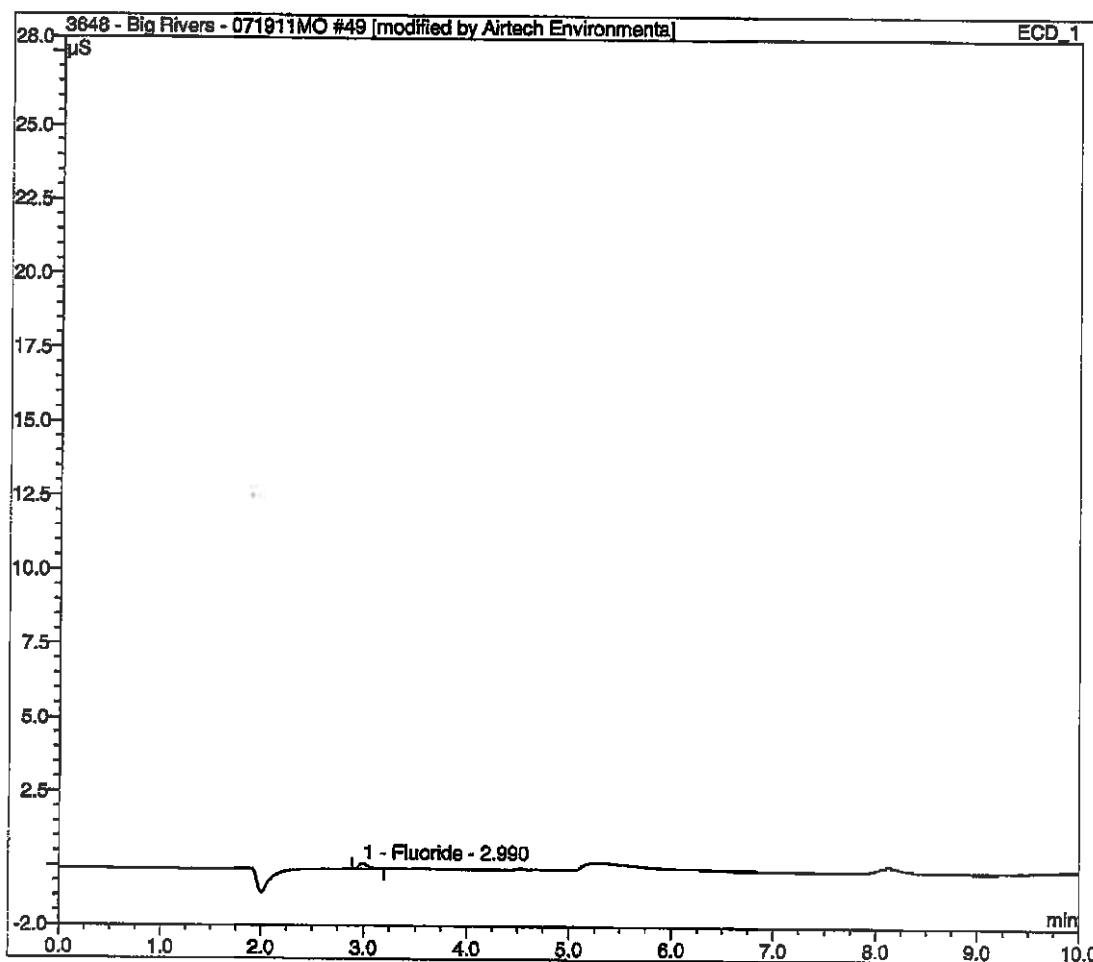
Sample Name	EST Exhaust Unit 3 - Run 2	Inj Vol	10.0
Sample Type	unknown	Dilution Factor	1.000
Program	ChlorideCal	Operator	msa
Inj Date/Time	21.07.11 12:12	Run Time	15:00

No.	Time min	Peak Name	Type	Area $\mu\text{S}\cdot\text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.99	Fluoride	BMB*	0.019	0.182	0.0162
TOTAL:				0.02	0.18	0.02



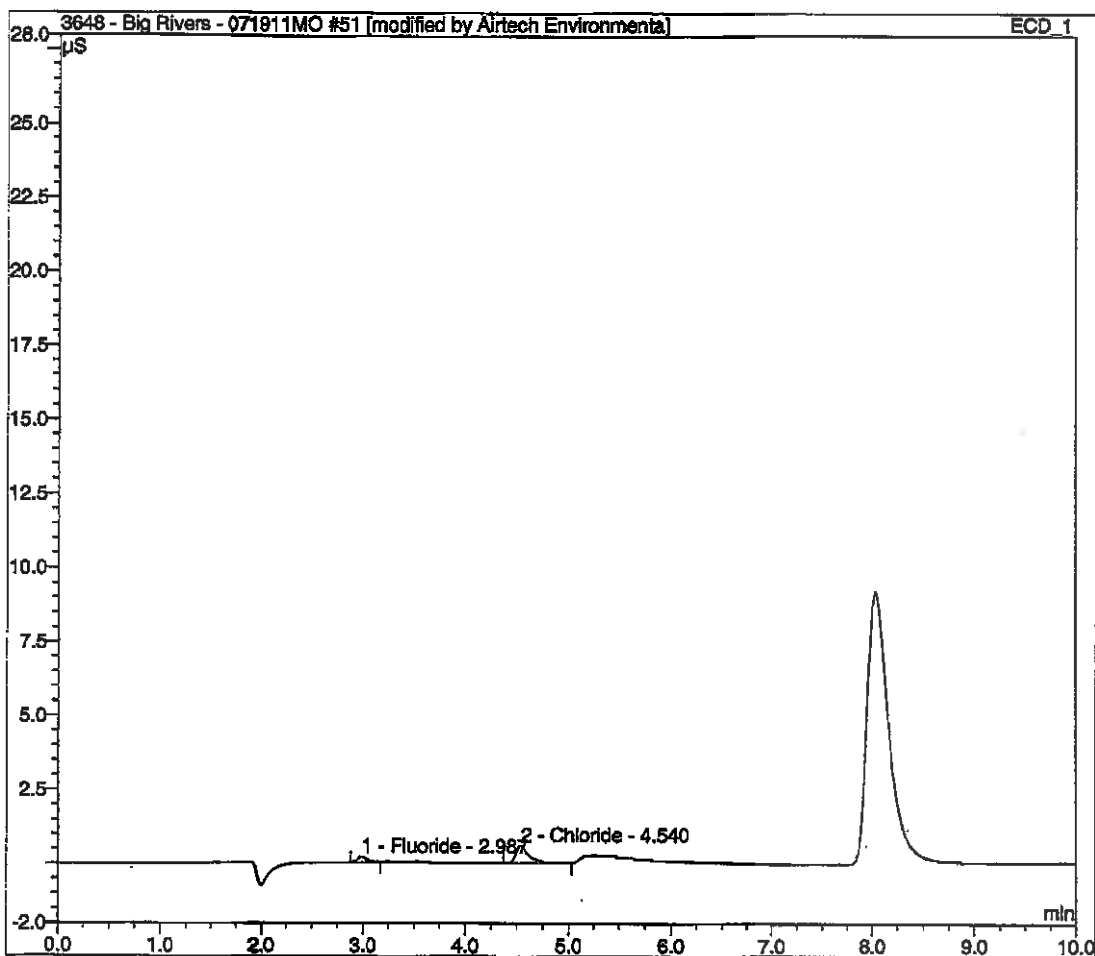
Sample Name	EST Exhaust Unit 3 - Run 2	Inj. Vol	10.0
Sample Type	unknown	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n/a
Inj. Date/Time	21.07.11 12:49	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.99	Fluoride	BMB*	0.019	0.182	0.0163
TOTAL:				0.02	0.18	0.02



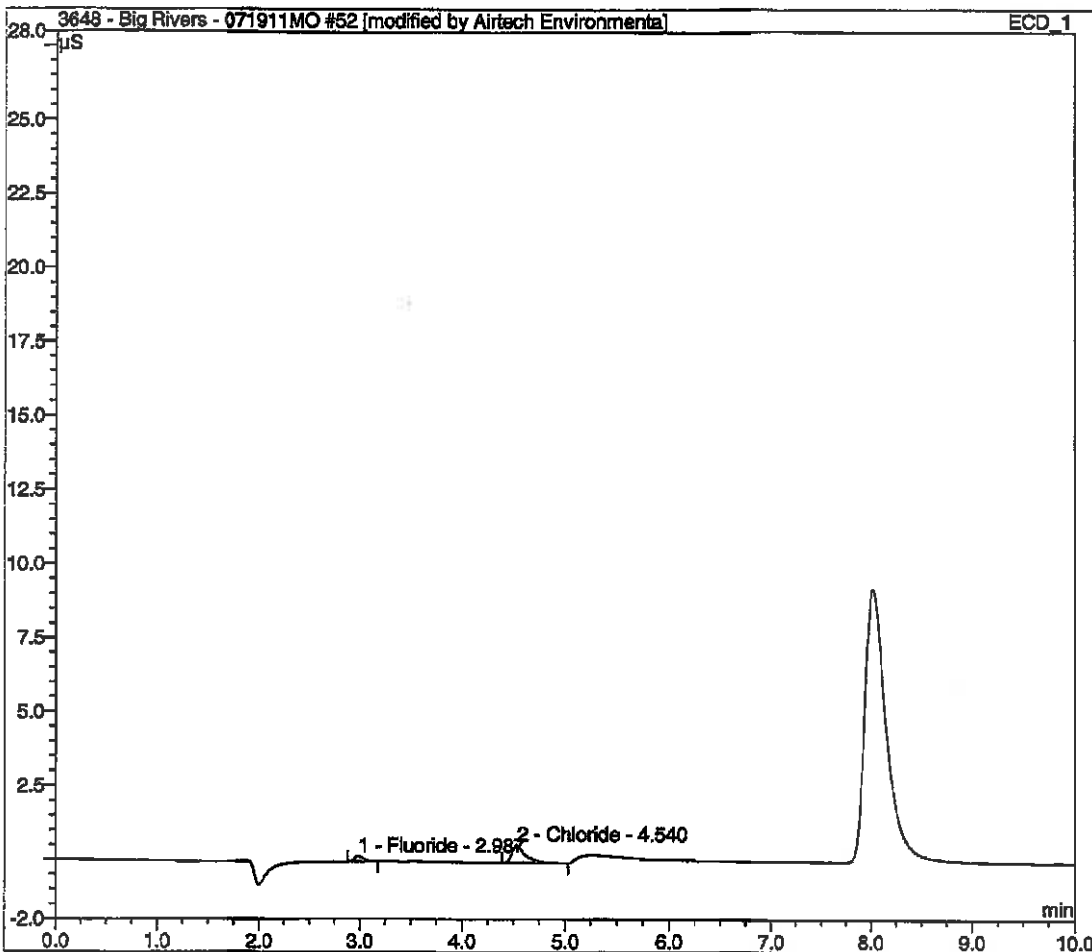
Sample Name:	EST Exhaust Unit 3 - Run 3	Inj. Vol:	10.0
Sample Type:	unknown	Dilution Factor:	1.0000
Program:	ChlorideCal	Generator:	n.a.
Inj. Date/Time:	21.07.11 13:32	Run Time:	15:06

No.	Time (min)	Peak Name	Type	Area (µS*min)	Height (µS)	Amount (ug/ml)
1	2.99	Fluoride	BMB	0.019	0.183	0.0161
2	4.54	Chloride	BMB	0.098	0.585	0.1082
TOTAL:				0.11	0.77	0.12



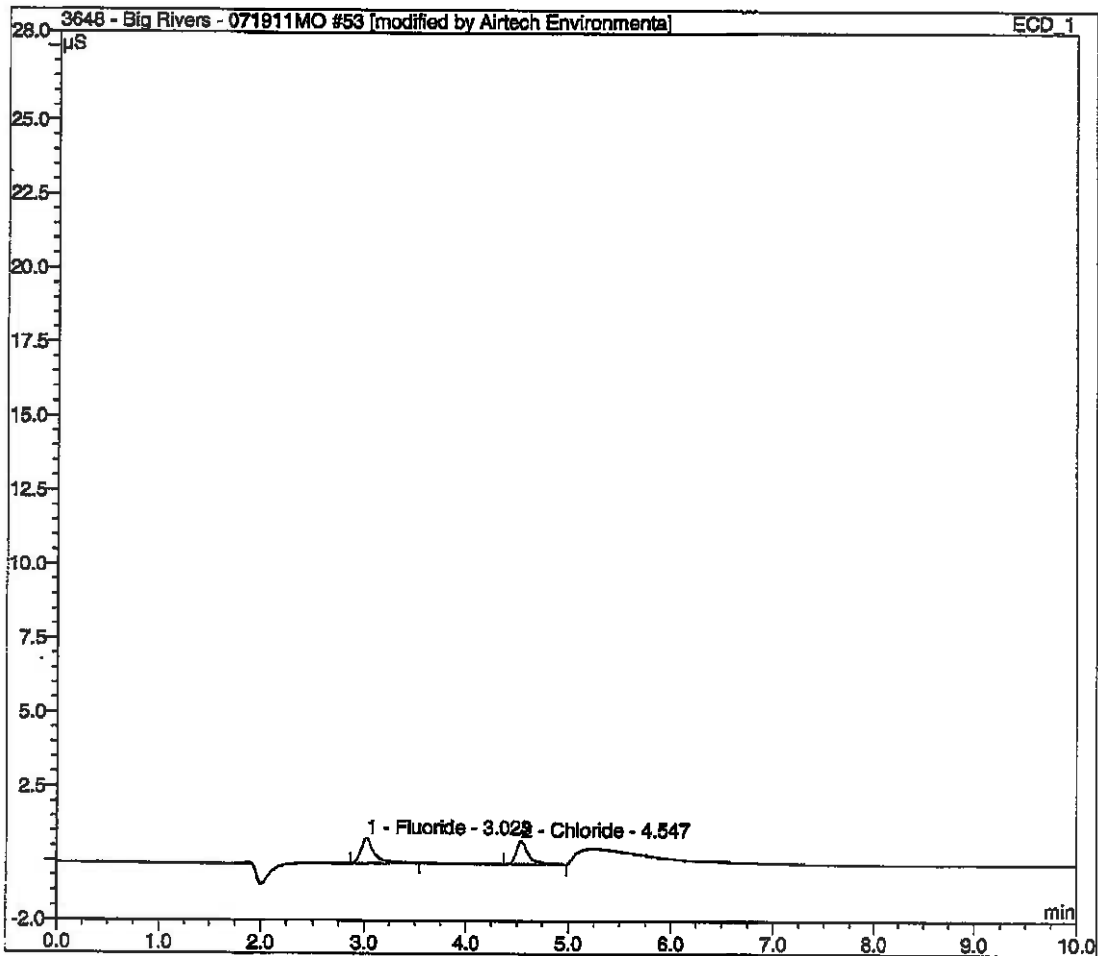
Sample Name:	EST Exhaust Unit3 - Run 3	Inj. Vol:	10.0
Sample Type:	unknown	Dilution Factor:	1.0000
Program:	ChlorideCal	Operator:	n.a.
Inj. Date/Time:	21/07/11 13:47	Run Time:	15.00

No.	Time (min)	Peak Name	Type	Area (µS·min)	Height (µS)	Amount (µg/ml)
1	2.89	Fluoride	BMB	0.019	0.182	0.0159
2	4.54	Chloride	BMB*	0.089	0.590	0.1091
TOTAL:				0.11	0.77	0.13



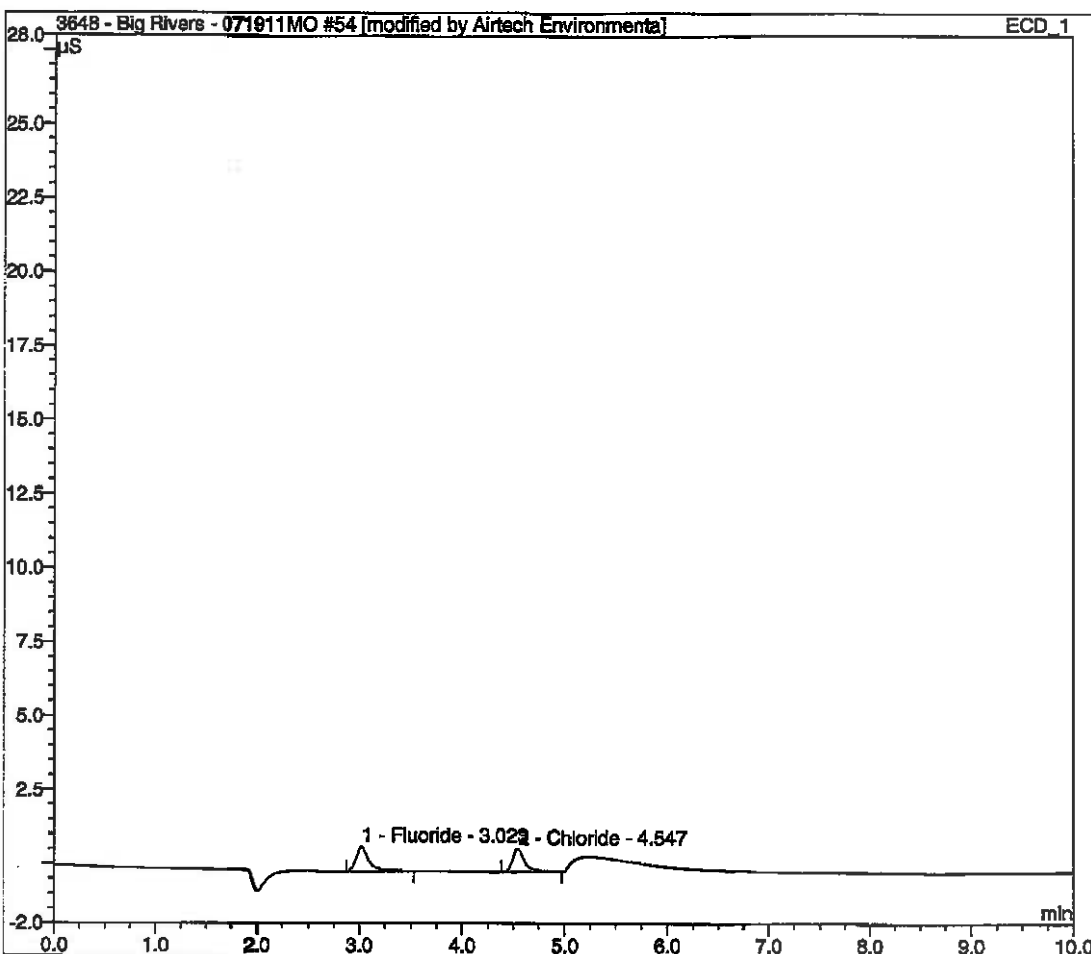
Sample Name:	cal std 1 - Cl & F in H2SO4	Int. Vol:	10.0
Sample Type:	standard	Dilution Factor:	1.0000
Program:	ChlorideCal	Operator:	n.a.
Inj. Date/Time:	21.07.11 14:53	Run Time:	15.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
1	3.02	Fluoride	BMB	0.126	0.848	0.1083
2	4.55	Chloride	BMB*	0.107	0.777	0.1316
TOTAL:				0.23	1.63	0.24



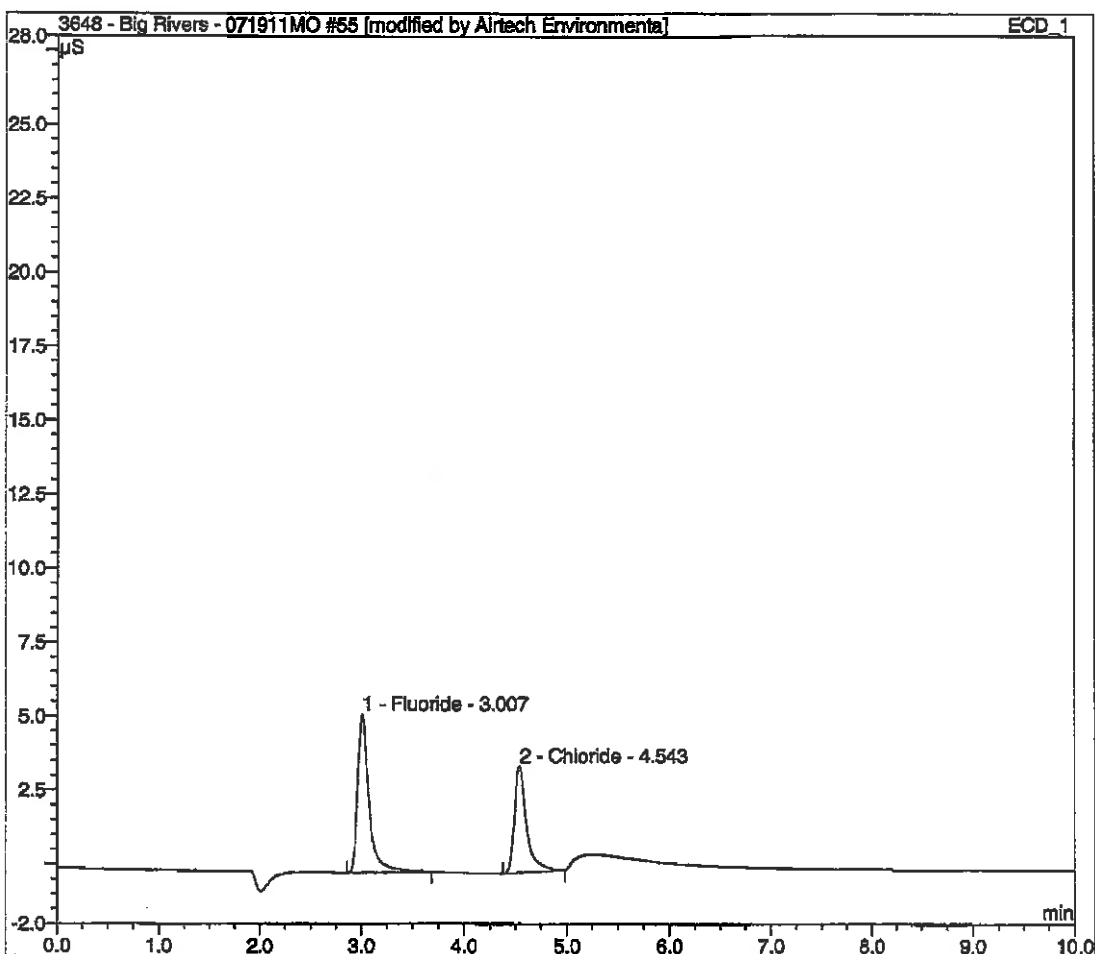
Sample Name:	cal str: 1 - Cl & F in H2SO4	Inj. Vol:	10.0
Sample Type:	standard	Dilution Factor:	1.0000
Program:	ChlorideCal	Operator:	
Inj. Date/Time:	21.07.11 14:20	Run Time:	15.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
1	3.02	Fluoride	BMB	0.123	0.848	0.1059
2	4.55	Chloride	BMB*	0.109	0.788	0.1338
TOTAL:				0.23	1.64	0.24



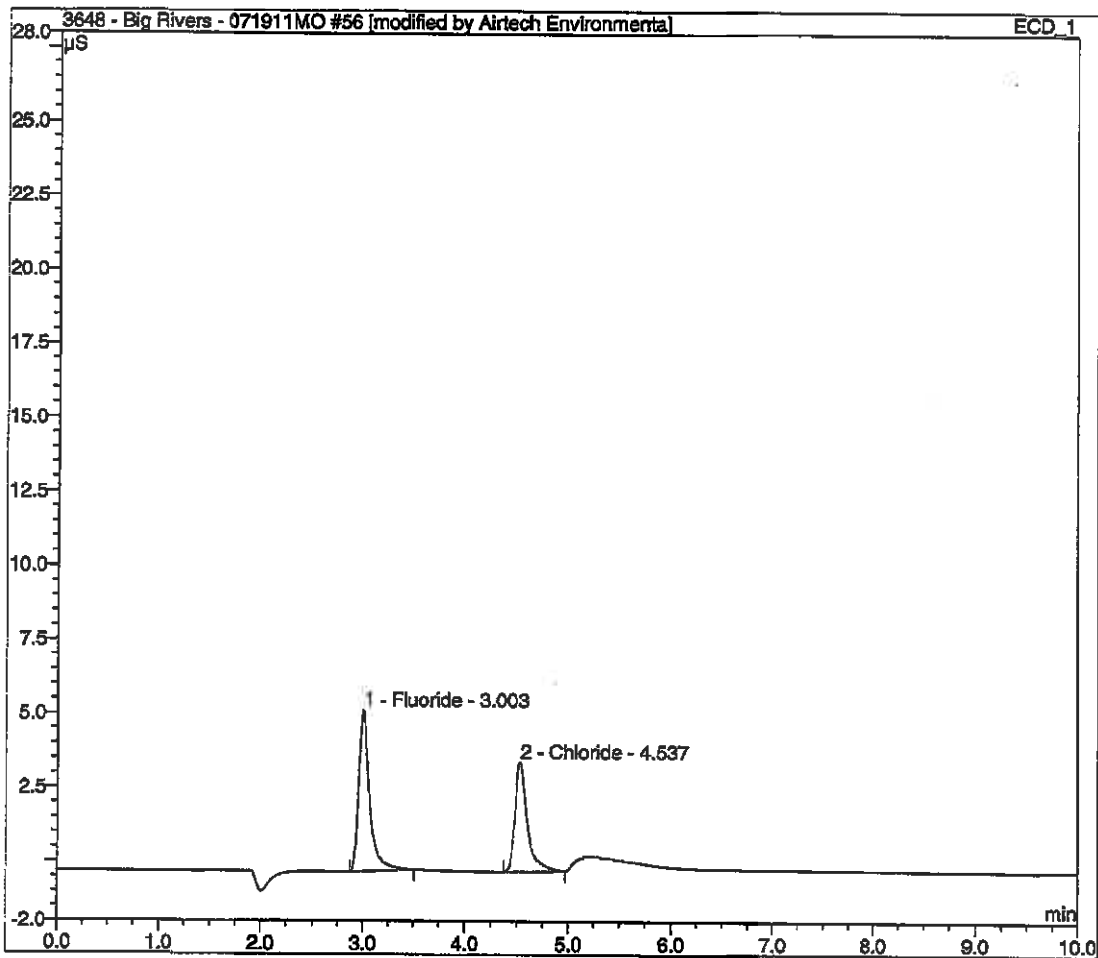
Sample Name	cal std 2 - Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	21.07.11 14:35	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S min}$	Height μS	Amount $\mu\text{mol/l}$
1	3.01	Fluoride	BMB*	0.684	5.338	0.5880
2	4.54	Chloride	BMB*	0.492	3.588	0.6054
TOTAL:				1.18	8.93	1.19



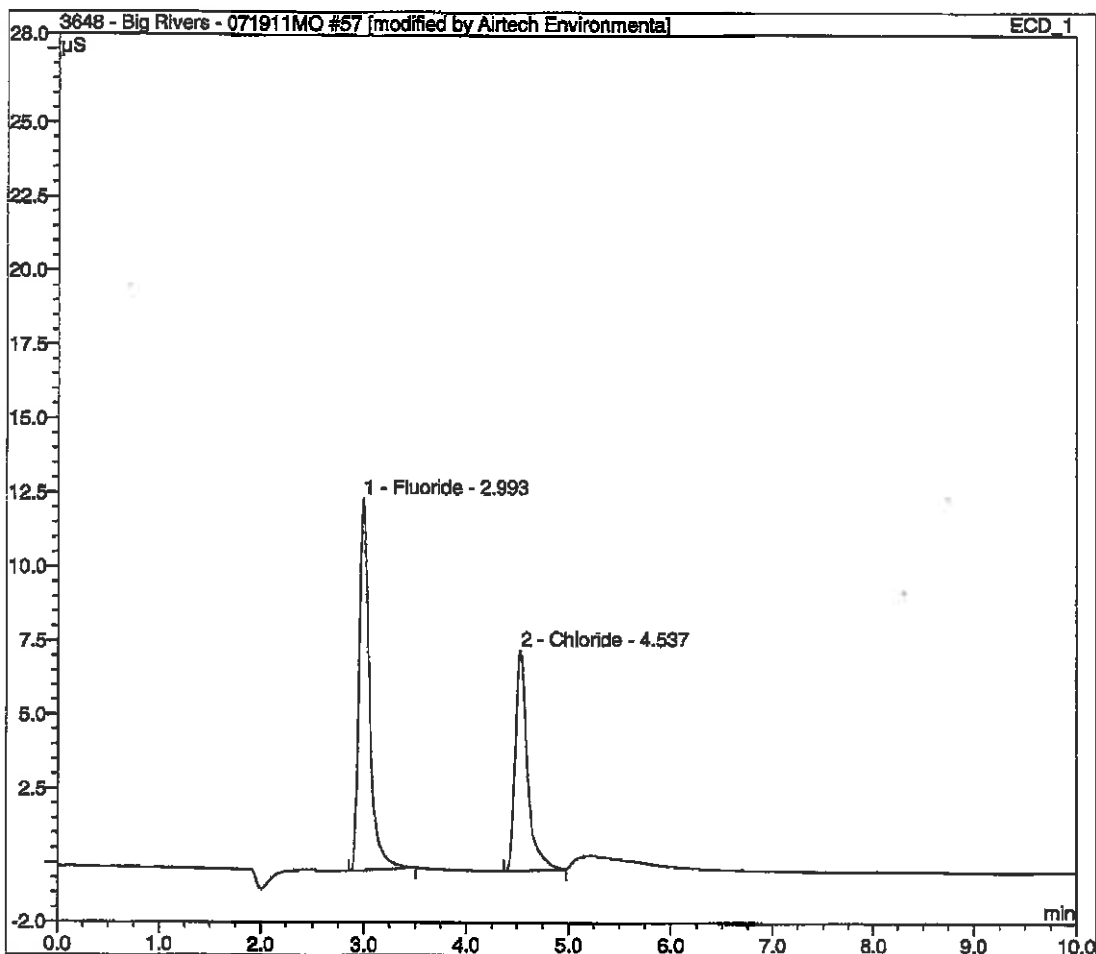
Sample Name	cal std 2 - Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	21.07.11 14:52	Run Time	15.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
1	3.00	Fluoride	BMB*	0.684	5.436	0.5882
2	4.54	Chloride	BMB*	0.511	3.689	0.6290
TOTAL:				1.20	9.13	1.22



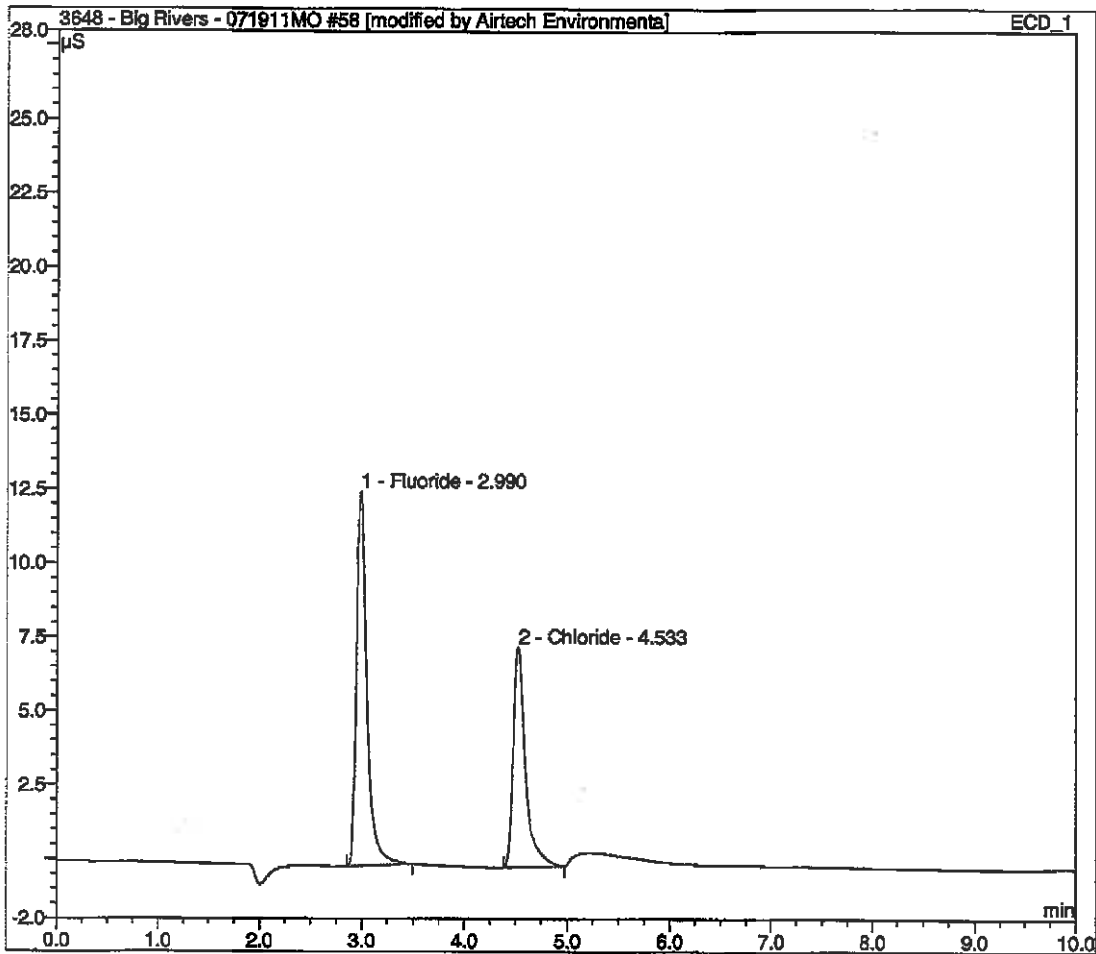
Sample Name	cal stu 3 - Cl & F in H2SO4	Inj. Vol	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	21.07.11 15:23	Run Time	15.00

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
1	2.99	Fluoride	BMB*	1.474	12.580	1.2674
2	4.54	Chloride	BMB*	1.020	7.468	1.2545
TOTAL:				2.49	20.05	2.52



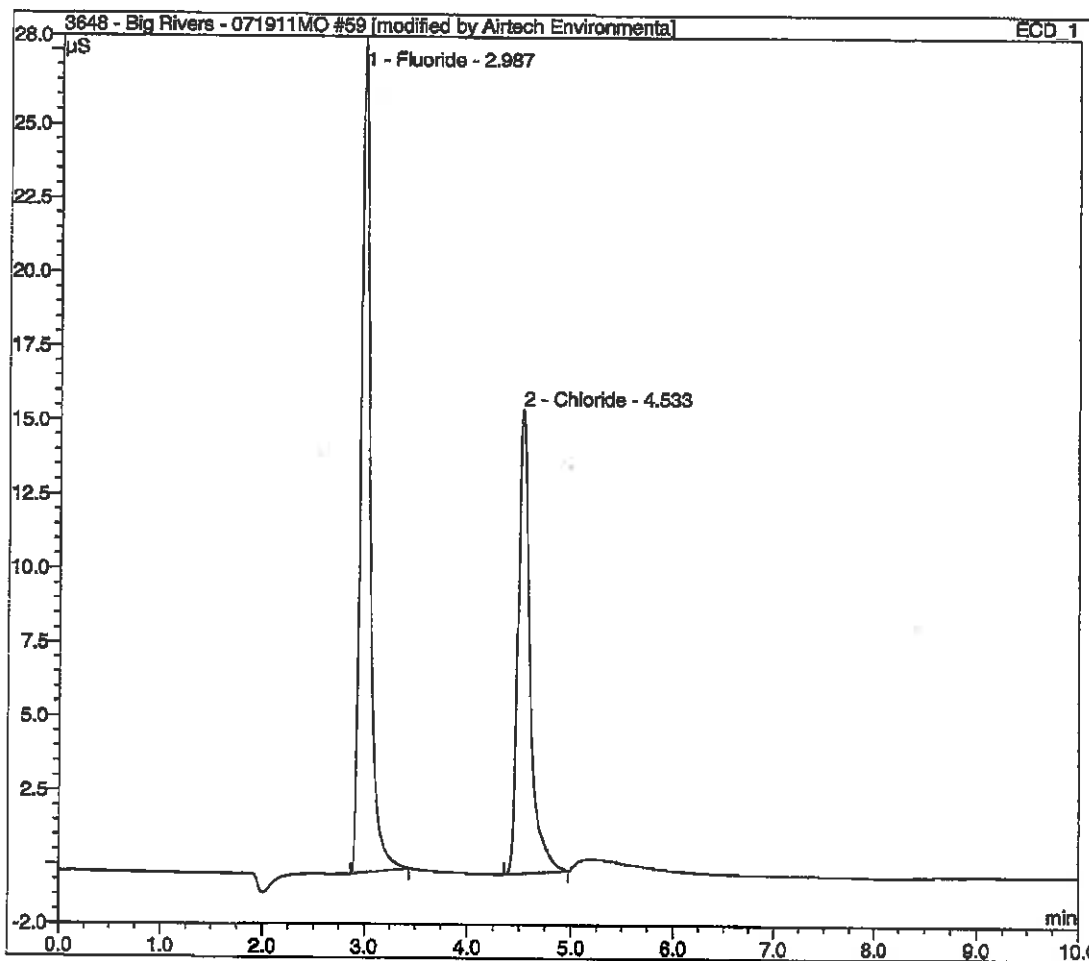
Sample Name	cal std 3 - Cl & F in H2SO4	Inj Vol	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj Date/Time	21.07.11 15:39	Run Time	15.00

No.	Time min.	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (ppm)
1	2.99	Fluoride	BMB*	1.475	12.649	1.2685
2	4.53	Chloride	BMB*	1.012	7.431	1.2452
TOTAL:				2.49	20.08	2.51



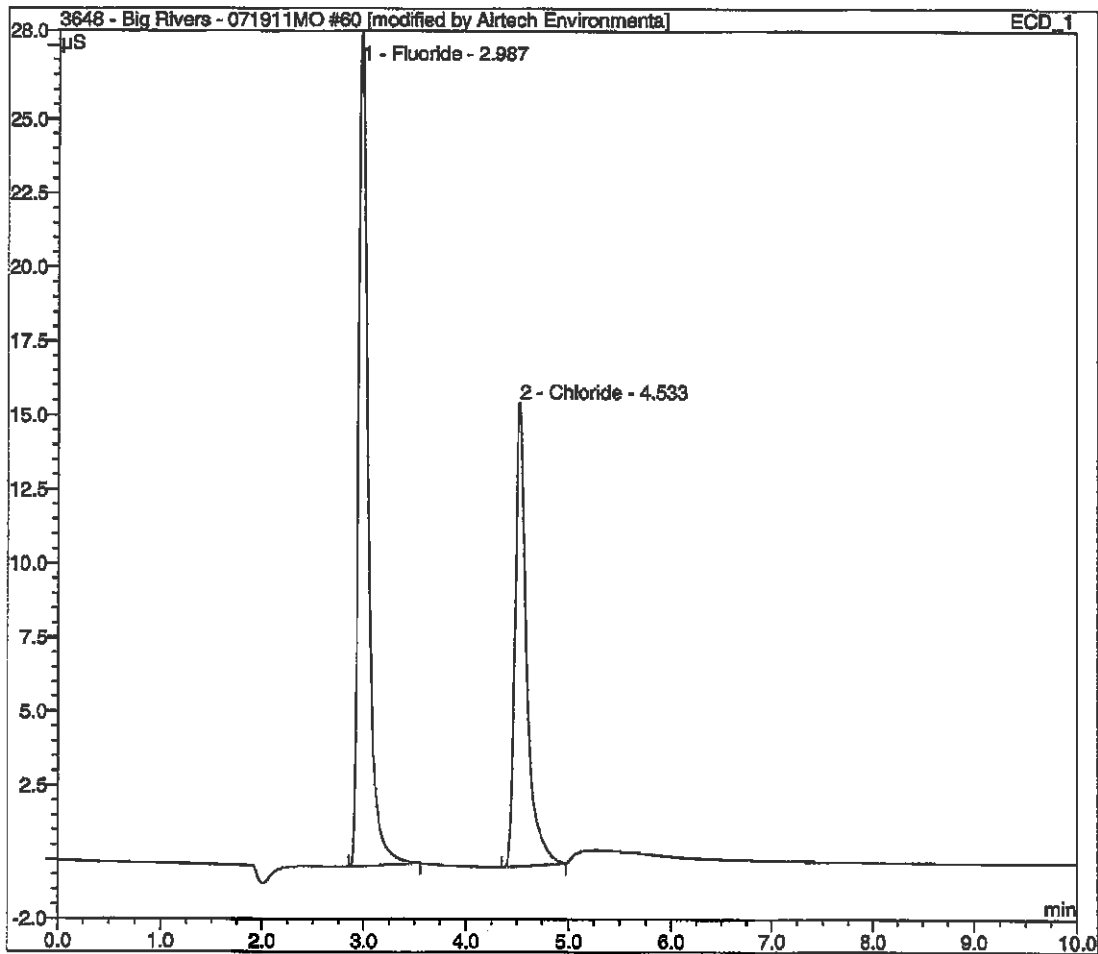
Sample Name	cal std 4 - Cl & F in H2SO4	Inj Vol	10.0
Sample Type	Standard	Dilution Factor	1.0000
Program	ChlorideCa	Operator	n.a.
Inj. Date/Time	21.07.11 15:55	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	2.99	Fluoride	BMB*	3.075	28.205	2.6442
2	4.53	Chloride	BMB	2.091	15.666	2.5719
TOTAL:				5.17	43.87	5.22



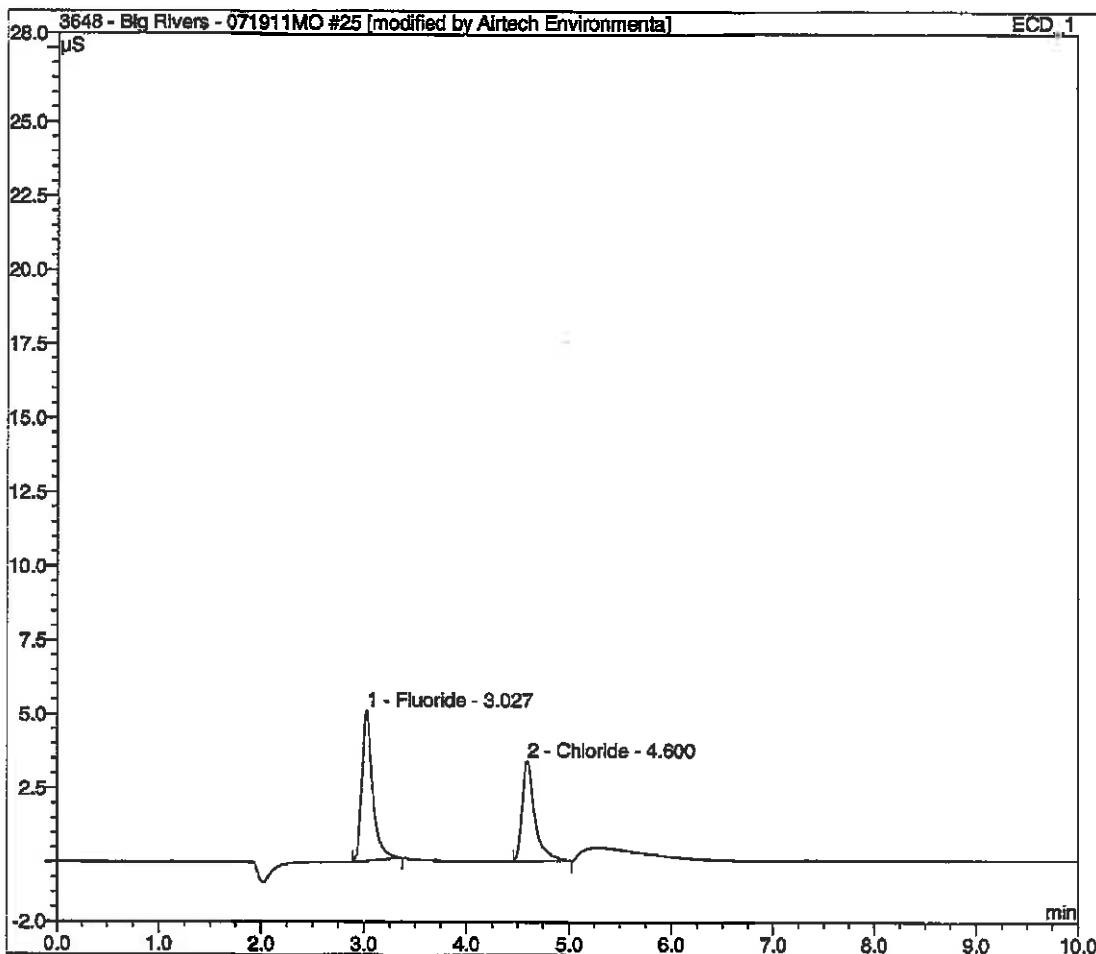
Sample Name	cal std 4 - Cl & F in H2SO4	Int. Vol.	19.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Int. Date/Time	21.07.11 16.12	Run Time	15.01

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount µg/ml
1	2.99	Fluoride	BMB*	3.105	28.299	2.6699
2	4.53	Chloride	BMB*	2.085	15.652	2.5643
TOTAL:				5.19	43.95	5.23



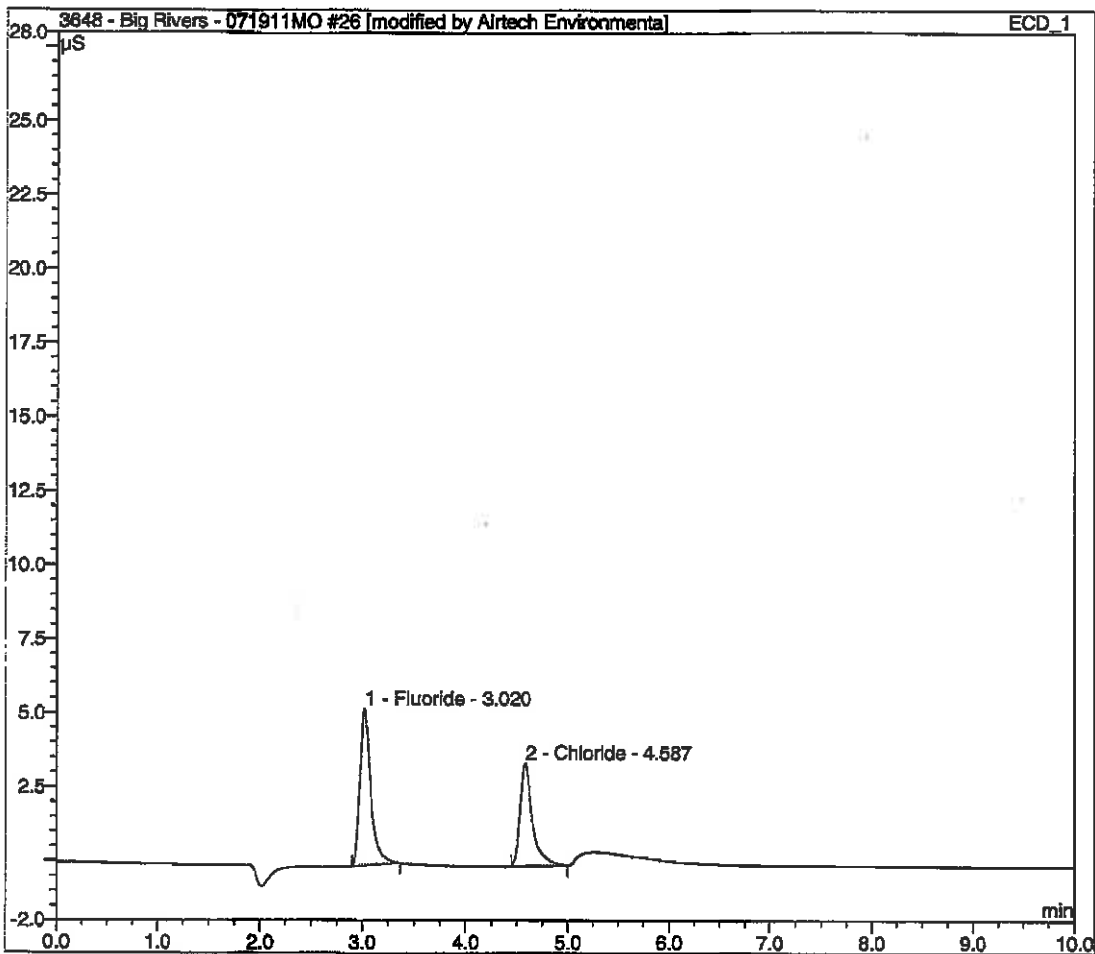
Sample Name	cal std 2 - Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	n.a.
Inj. Date/Time	20107 11 09:39	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	3.03	Fluoride	BMB*	0.627	5.071	0.5389
2	4.60	Chloride	BMB*	0.487	3.387	0.5985
TOTAL:				1.11	8.46	1.14



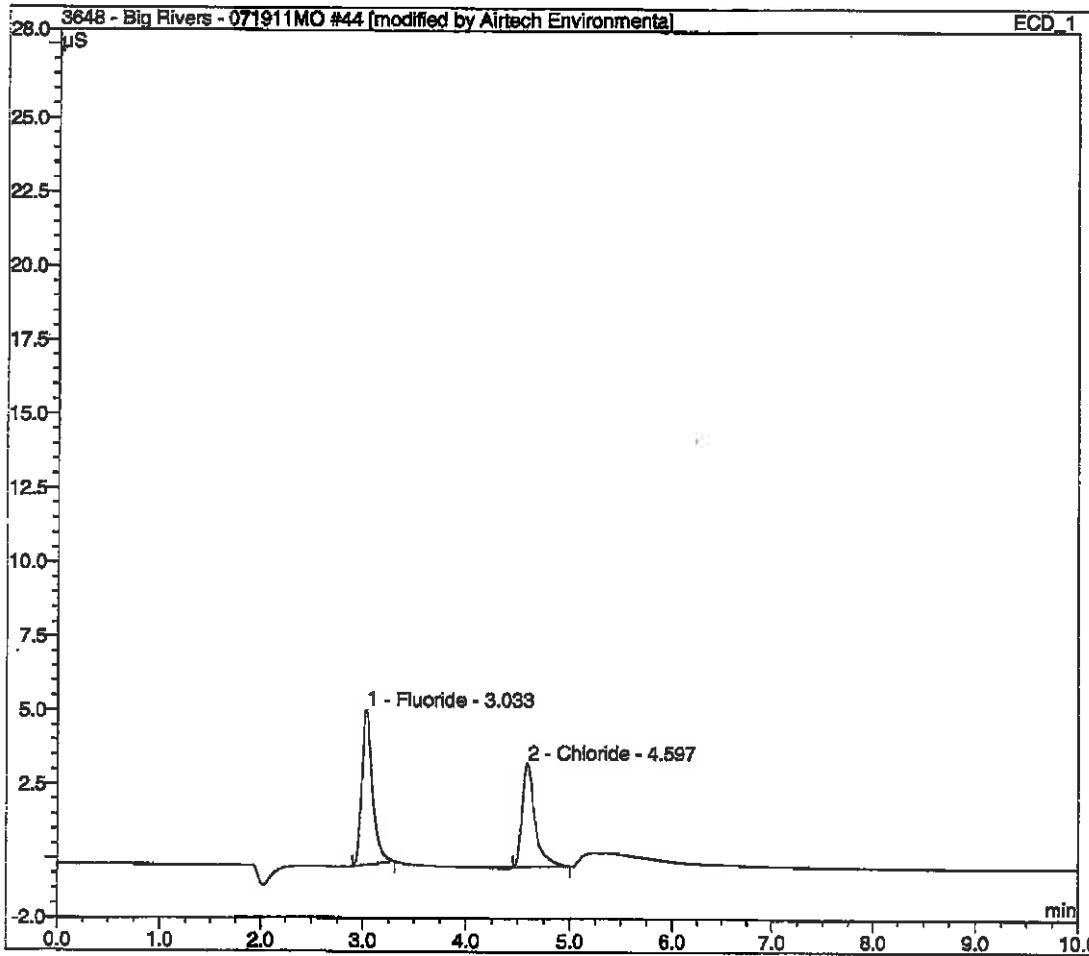
Sample Name:	cal std 2 - Cl & F in H2SO4	Inj. Vol:	10.0
Sample Type:	standard	Dilution Factor:	1.0000
Program:	ChlorideCal	Operator:	n.a.
Inj. Date Time:	20.07.11 09:55	Run Time:	15.00

No.	Time (min)	Peak Name	Type	Area (µS*min)	Height (µS)	Amount (µg/ml)
1	3.02	Fluoride	BMB*	0.639	5.276	0.5498
2	4.59	Chloride	BMB*	0.490	3.471	0.6032
TOTAL:				1.13	8.75	1.15



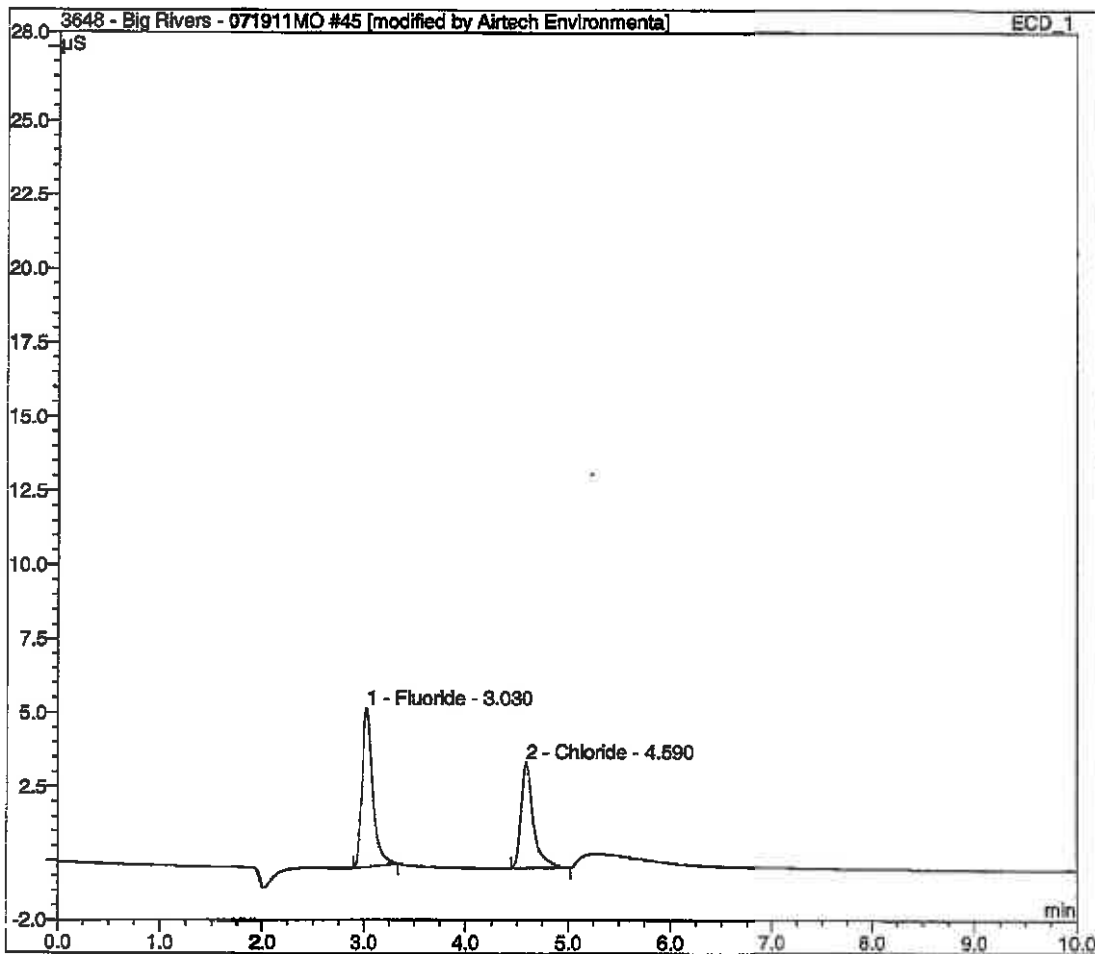
Sample Name	cal sta 2 - Cl & F in H2SO4	Inj. Vol.	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	na
Inj. Date/Time	21.07.11 10:58	Run Time	15.00

No.	Time min	Peak Name	Type	Area uS*min	Height uS	Amount ug/ml
1	3.03	Fluoride	BMB*	0.630	5.229	0.5416
2	4.60	Chloride	BMB*	0.495	3.494	0.6093
TOTAL:				1.13	8.72	1.15



Sample Name	cal std 2 - Cl & F in H2SO4	Wt	10.0
Sample Type	standard	Dilution Factor	1.0000
Program	ChlorideCal	Operator	na
Inj. Date/Time	21.07.11 11:16	Run Time	15.00

No.	Time min	Peak Name	Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount $\mu\text{g/ml}$
1	3.03	Fluoride	BMB*	0.650	5.325	0.5586
2	4.59	Chloride	BMB*	0.503	3.555	0.6193
TOTAL:				1.15	8.88	1.18



7/12/11

3648 Big Rivers

Sample Name	Sample Vol (ml)
Reagent Blank	523.4
Common Stack Run 1	873.6
" " Run 2	828.6
" " Run 3	913.4
EST Exhaust Unit 1 Run 1	546.8
" " " Run 2	471.5
" " " Run 3	641.4 *
" " Unit 2 Run 1	536.7
" " " Run 2	570.8
" " " Run 3	601.3
" " Unit 3 Run 1	599.5
" " " Run 2	520.5
" " " Run 3	482.5

* Small amount of leakage discovered
after receiving sample approx 5 ml

% EST Exhaust Units 2 & 3 samples
were diluted to fit the cal curve.
dilutions were completed using a
2 ml aliquote of sample and 50 ml
of 100 ml DI water. yielding dilution
factors of 26 & 51 respectively

Chain of Custody

Includes the following:

- **Field Chain of Custody**

Airtech Environmental Services, Inc.

601A Country Club Drive
Bensenville, IL 60106

Project Number: 3648

Antimony, Arsenic, Beryllium, Cadmium,
Chromium, Cobalt, Lead, Manganese,
Nickel and Selenium

EPA Method 29 Analysis

Analytical Report
17070



Element One, Inc.
5022-C Wrightsville Av., Wilmington, NC 28403
910-793-0128 FAX: 910-792-6853 e1lab@e1lab.com

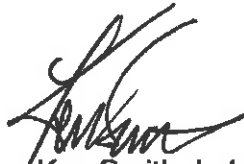
The following data for Analytical Report 17070
has been reviewed for completeness, accuracy,
adherence to method protocol,
and compliance with quality assurance guidelines.

Review by:



Daphne Woodman, Chemist
August 4, 2011

Report Reviewed and Finalized By:



Ken Smith, Laboratory Director
August 4, 2011

SUMMARY OF RESULTS

Summary of Analysis

Front Half – ESP 1 - Summary of Method 29 Metals Analysis

Element	ESP 1-Run 1	ESP 1-Run 2	ESP 1-Run 2	ESP 1-Run 3
	e17070-1 FH Total µg	e17070-2 FH Total µg	e17070-2 FH dup Total µg	e17070-3 FH Total µg
Antimony	7.77	9.72	9.59	17.2
Arsenic	33.9	39.3	39.4	59.0
Beryllium	3.26	3.99	4.29	7.53
Cadmium	4.51	5.06	5.17	8.91
Chromium	216	80.2	82.7	92.0
Cobalt	9.41	9.68	10.4	16.7
Lead	27.7	59.6	60.3	56.1
Manganese	80.1	80.0	84.5	134
Nickel	194	73.3	76.6	83.2
Selenium	153	150	152	152

Back Half – ESP 1 - Summary of Method 29 Metals Analysis

Element	ESP 1-Run 1	ESP 1-Run 2	ESP 1-Run 2	ESP 1-Run 3
	e17070-1 BH Total µg	e17070-2 BH Total µg	e17070-2 BH dup Total µg	e17070-3 BH Total µg
Antimony	0.984	0.326	0.332	0.528
Arsenic	3.33	6.86	6.72	8.59
Beryllium	< 0.025	< 0.025	< 0.025	< 0.025
Cadmium	3.12	0.434	0.423	0.735
Chromium	3.37	2.66	2.82	10.5
Cobalt	0.131	0.303	0.307	0.216
Lead	0.748	0.765	0.719	2.58
Manganese	3.96	4.57	4.49	7.69
Nickel	1.51	1.47	1.53	2.87
Selenium	81.7	161	163	101

Summary of Analysis

Front Half – ESP 2 - Summary of Method 29 Metals Analysis

Element	ESP 2-Run 1 e17070-4 FH <u>Total µg</u>	ESP 2-Run 2 e17070-5 FH <u>Total µg</u>	ESP 2-Run 2 e17070-5 FH dup <u>Total µg</u>	ESP 2-Run 3 e17070-6 FH <u>Total µg</u>
Antimony	9.69	8.37	8.34	12.7
Arsenic	36.5	32.5	32.2	43.5
Beryllium	4.46	3.95	3.87	6.00
Cadmium	6.32	5.67	5.69	6.63
Chromium	62.0	134	133	207
Cobalt	10.6	12.7	12.6	15.4
Lead	35.7	31.1	30.5	40.8
Manganese	72.5	87.6	87.2	107
Nickel	56.7	160	157	143
Selenium	97.8	84.4	83.7	63.3

Back Half – ESP 2 - Summary of Method 29 Metals Analysis

Element	ESP 2-Run 1 e17070-4 BH <u>Total µg</u>	ESP 2-Run 2 e17070-5 BH <u>Total µg</u>	ESP 2-Run 2 e17070-5 BH dup <u>Total µg</u>	ESP 2-Run 3 e17070-6 BH <u>Total µg</u>
Antimony	0.826	1.20	1.41	0.537
Arsenic	8.78	11.0	10.1	4.63
Beryllium	< 0.025	< 0.025	< 0.025	< 0.025
Cadmium	0.295	0.123	0.121	0.122
Chromium	2.66	2.82	3.24	2.85
Cobalt	0.274	0.181	0.210	0.158
Lead	0.790	0.673	0.770	0.491
Manganese	5.37	5.02	5.80	4.65
Nickel	1.68	1.62	1.43	3.75
Selenium	217	286	268	83.9

Summary of Analysis

Front Half – ESP 3 - Summary of Method 29 Metals Analysis

Element	ESP 3-Run 1 e17070-7 FH Total µg	ESP 3-Run 2 e17070-8 FH Total µg	ESP 3-Run 2 e17070-8 FH dup Total µg	ESP 3-Run 3 e17070-9 FH Total µg
Antimony	5.00	13.2	13.1	8.87
Arsenic	19.3	40.2	40.6	34.8
Beryllium	2.37	4.72	4.71	4.60
Cadmium	3.36	7.16	7.22	6.24
Chromium	122	186	189	141
Cobalt	7.73	12.6	12.9	11.9
Lead	18.0	38.8	38.6	33.9
Manganese	64.8	102	105	93.9
Nickel	41.3	67.5	68.2	65.0
Selenium	81.1	120	120	77.6

Back Half – ESP 3 - Summary of Method 29 Metals Analysis

Element	ESP 3-Run 1 e17070-7 BH Total µg	ESP 3-Run 2 e17070-8 BH Total µg	ESP 3-Run 2 e17070-8 BH dup Total µg	ESP 3-Run 3 e17070-9 BH Total µg
Antimony	3.34	0.603	0.603	0.572
Arsenic	23.3	10.3	9.59	5.55
Beryllium	0.477	< 0.025	< 0.025	< 0.025
Cadmium	0.862	< 0.1	0.100	0.614
Chromium	163	60.0	54.5	20.2
Cobalt	2.41	0.397	0.402	0.267
Lead	10.6	1.62	1.45	1.06
Manganese	19.0	4.59	4.61	4.80
Nickel	38.6	16.4	14.9	10.7
Selenium	178	260	236	128

Summary of Analysis

Front Half – Common Stack - Summary of Method 29 Metals Analysis

Element	Common Stack-R1 e17070-10 FH Total µg	Common Stack-R2 e17070-11 FH Total µg	Common Stack-R2 e17070-11 FH dup Total µg	Common Stack-R3 e17070-12 FH Total µg
Antimony	3.75	1.77	1.99	2.86
Arsenic	9.17	7.44	8.07	7.61
Beryllium	0.318	0.282	0.280	0.328
Cadmium	0.898	0.794	0.869	0.723
Chromium	8.25	6.60	7.36	7.54
Cobalt	0.922	0.724	0.793	0.874
Lead	2.99	2.89	3.14	3.06
Manganese	8.03	7.35	8.37	8.22
Nickel	11.9	12.1	13.2	8.54
Selenium	102	51.4	56.0	59.1

Back Half – Common Stack - Summary of Method 29 Metals Analysis

Element	Common Stack-R1 e17070-10 BH Total µg	Common Stack-R2 e17070-11 BH Total µg	Common Stack-R2 e17070-11 BH dup Total µg	Common Stack-R3 e17070-12 BH Total µg
Antimony	0.144	0.230	0.235	< 0.1
Arsenic	1.76	1.88	1.85	1.26
Beryllium	< 0.025	< 0.025	< 0.025	< 0.025
Cadmium	< 0.1	0.720	0.738	< 0.1
Chromium	1.40	3.96	4.12	2.34
Cobalt	0.129	0.157	0.159	< 0.1
Lead	0.825	1.63	1.62	0.535
Manganese	3.41	4.40	4.48	4.63
Nickel	1.34	2.29	2.28	2.84
Selenium	59.5	57.2	57.8	39.8

Summary of Analysis

Blank - Summary of Method 29 Metals Analysis

Element	Front Half	Teflon Blank	Quartz Blank	Back Half
	Blank e17070-13 FH Total µg	e17070-13 Teflon Total µg	e17070-13 Quartz Total µg	Blank e17070-13 BH Total µg
Antimony	0.556	0.296	< 0.05	< 0.1
Arsenic	< 0.05	0.548	0.095	< 0.1
Beryllium	< 0.013	0.053	< 0.013	< 0.025
Cadmium	< 0.05	0.824	0.130	< 0.1
Chromium	0.190	15.6	2.21	2.68
Cobalt	< 0.05	0.816	< 0.05	< 0.1
Lead	0.062	1.84	0.447	0.286
Manganese	0.275	4.40	1.78	2.93
Nickel	0.061	1.39	0.794	1.87
Selenium	< 0.05	< 0.05	< 0.05	< 0.1

ANALYTICAL NARRATIVE

Element One Analytical Narrative

Client:	Airtech Environmental Services, Inc.	Element One #:	17070
Client ID:	3648/Big Rivers Energy – Coleman Station	Analyst:	DBW
Method:	Method 29	Dates Received:	07/26/11
Analytes:	Sb, As, Be, Cd, Cr, Co, Pb, Mn, Ni & Se	Dates Analyzed:	07/29/11-08/01/11

Summary of Analysis

The Method 29 samples were digested, prepared, and analyzed according to Method 29 protocol. Samples were analyzed for metals using a PerkinElmer ELAN 6100 ICP-MS.

Detection Limits

The ICP-MS instrument reporting limits were 0.25µg/L for beryllium and 1.0µg/L for the other metals.

Analysis QA/QC

Duplicate analyses relative percent difference (RPD), spike sample recovery, and second source calibration verification data are summarized in the Quality Control Section.

*Ref page 13: The beryllium spike recoveries for ESP 2-Run 3, EXP 3-Run 3 and Common Stack-R3 were outside of the ±25% laboratory guidelines with 65%, 69% and 65% recovery, respectively. The samples were analyzed at dilutions resulting in spike recoveries of 93% for ESP 2-Run 3, 94% for EXP 3-Run 3 and 89% for Common Stack-R3; indicating matrix interference. The samples were non-detect, therefore this should have no significant impact on the results.

**Ref page 13: The arsenic spike recovery for ESP 2-Run 3 was outside of the ±25% laboratory guidelines with 131% recovery. The sample was analyzed at a fifty-fold dilution resulting in a spike recovery of 115%.

***Ref page 13: The cadmium and antimony spike recoveries for Common Stack-R3 were outside of the ±25% laboratory guidelines with 63% for cadmium and 68% for antimony. The sample was analyzed at a five-fold dilution resulting in spike recoveries of 85% for cadmium and 83% for antimony; indicating matrix interference. The samples were non-detect, therefore this should have no significant impact on the results. All other QA/QC data was within the criteria of the method.

Additional Comments

The reported results have not been corrected for any blank values or spike recovery values. The ICP analysis of the Reagent Blank samples revealed detectable concentrations of metals, subsequent analyses produced equivalent results.

QUALITY CONTROL SUMMARY

Summary of Quality Control Data

Front Half - Metals Duplicate Analysis RPD

(Method 29 QC limits: < 20% for RPD)

Element	ESP 1-Run 2 RPD	ESP 2-Run 2 RPD	ESP 3-Run 2 RPD	Common Stack-R2 RPD
Antimony	1.4%	0.4%	1.4%	11.5%
Arsenic	0.1%	0.9%	1.1%	8.1%
Beryllium	7.1%	2.1%	0.2%	0.7%
Cadmium	2.1%	0.3%	0.9%	9.0%
Chromium	3.2%	0.6%	1.4%	10.9%
Cobalt	6.9%	0.8%	2.3%	9.1%
Lead	1.1%	1.8%	0.6%	8.3%
Manganese	5.5%	0.4%	2.4%	12.9%
Nickel	4.5%	1.8%	1.1%	8.7%
Selenium	1.1%	0.8%	0.7%	8.5%

Back Half - Metals Duplicate Analysis RPD

(Method 29 QC limits: < 20% for RPD)

Element	ESP 1-Run 2 RPD	ESP 2-Run 2 RPD	ESP 3-Run 2 RPD	Common Stack-R2 RPD
Antimony	1.7%	16.1%	0.1%	1.8%
Arsenic	2.1%	8.6%	6.7%	1.8%
Beryllium	NA	NA	NA	NA
Cadmium	2.7%	2.1%	NA	2.5%
Chromium	5.8%	13.8%	9.5%	3.9%
Cobalt	1.1%	14.6%	1.4%	1.6%
Lead	6.3%	13.4%	11.1%	0.6%
Manganese	1.7%	14.4%	0.5%	1.8%
Nickel	4.1%	12.7%	9.5%	0.4%
Selenium	0.8%	6.6%	9.9%	1.1%

Summary of Quality Control Data

Front Half - Metals Analysis Spike Recoveries

(Method 29 QC limits: ±25% for Spike Recoveries)

Element	ESP 1-Run 3 Recovery	ESP 2-Run 3 Recovery	ESP 3-Run 3 Recovery	Common Stack-R3 Recovery
Antimony	85%	83%	81%	85%
Arsenic	94%	90%	88%	77%
Beryllium	93%	96%	95%	99%
Cadmium	97%	98%	97%	80%
Chromium	101%	86%	89%	86%
Cobalt	94%	93%	92%	107%
Lead	91%	95%	93%	96%
Manganese	105%	89%	88%	86%
Nickel	94%	91%	90%	96%
Selenium	88%	88%	85%	101%

Back Half - Metals Analysis Spike Recoveries

(Method 29 QC limits: ±25% for Spike Recoveries)

Element	ESP 1-Run 3 Recovery	ESP 2-Run 3 Recovery	ESP 3-Run 3 Recovery	Common Stack-R3 Recovery
Antimony	105%	97%	97%	***68%
Arsenic	109%	**131%	106%	80%
Beryllium	75%	*65%	*69%	*65%
Cadmium	87%	80%	83%	***63%
Chromium	114%	122%	114%	120%
Cobalt	107%	108%	106%	106%
Lead	102%	88%	100%	97%
Manganese	95%	100%	97%	105%
Nickel	97%	95%	112%	94%
Selenium	104%	105%	115%	96%

*See Analytical Narrative, page 10.

**See Analytical Narrative, page 10.

***See Analytical Narrative, page 10.

Summary of Quality Control Data

Second Source Calibration Check Recoveries (Method 29 QC limits: $\pm 10\%$ for Second Source Continuing Check Standard*)

Element	0.25 ppb	1 ppb	50 ppb	100 ppb*	250 ppb
Antimony		102%	99%	100%	100%
Arsenic		97%	97%	102%	100%
Beryllium	109%	102%	100%	103%	100%
Cadmium		104%	100%	103%	100%
Chromium		99%	97%	100%	104%
Cobalt		100%	96%	101%	101%
Lead		101%	100%	103%	101%
Manganese		94%	94%	97%	101%
Nickel		96%	100%	104%	101%
Selenium		88%	96%	100%	98%

SAMPLE CUSTODY

ARITECH ENVIRONMENTAL SERVICES INC.
Chain of Custody

17070
17069 2008 7.26.11

Project Number	3048	Location	ESP Exhaust Unit 1	Analysis Requested	Page	1	of	1
Client	Big Rivers Energy	Date	Completed By	James Chiles				
Plant	Coleman Station							
- by TLT								
D No.	Run No.	Date	Sample Description	Metals HAPs	Number of Containers	Notes		
28-R1-MNO	1		FH Rinse of 0.1M HNO ₃	X	1			
28-R2-MNO	2		FH Rinse of 0.1M HNO ₃	X	1			
28-R3-MNO	3		FH Rinse of 0.1M HNO ₃	X	1			
28-R1-FIL	1		Quartz Filter	X	1			
28-R2-FIL	2		Quartz Filter	X	1			
28-R3-FIL	3		Quartz Filter	X	1			
28-R1-SY/10%	1		Imp catches and rinses	X	1			
28-R2-SY/10%	2		Imp catches and rinses	X	1			
28-R3-SY/10%	3		Imp catches and rinses	X	1			
Requisitioned By (signature)		Accepted By (signature)		Carrier				
Date/Time		Date/Time		Laboratory				
Signature By (printed)		Signature By (printed)		Contact				
Signature By (printed)		Signature By (printed)		Address				
Date/Time		Date/Time		Phone				
Date/Time		Date/Time		Fax				
Date/Time		Date/Time		Carrier				

Samples received in good condition. No empty containers.



Artech Environmental Services Inc.
801A County Club Drive
Barrington, IL 60015
Phone: (830) 980-4740, Fax: (830) 980-4745

AIRTECH ENVIRONMENTAL SERVICES INC.
Chain of Custody

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17069 MS 7.x.1

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Project Number		3049		Location		Esp Exhaust Unit 2		Analyte Requested		Page 1 of 1	
Client		Big Rivers Energy Columbus Station		Date		Completed By		James Christ		Notes	
D No.	Run No.	Date	Sample Description								
20-R1-HNO	1		FH Rinse of 0.1N HNO ₃								
20-R2-HNO	2		FH Rinse of 0.1N HNO ₃								
20-R3-HNO	3		FH Rinse of 0.1N HNO ₃								
20-R1-FIL	1		Quartz Filter								
20-R2-FIL	2		Quartz Filter								
20-R3-FIL	3		Quartz Filter								
20-R1-5%10%	1		Imp catches and rinses								
20-R2-5%10%	2		Imp catches and rinses								
20-R3-5%10%	3		Imp catches and rinses								
Requisitioned By (Signature)				Requisitioned By (Signature)				Center Laboratory			
Date/Time				Date/Time				Contact Address			
Accepted By (Signature)				Accepted By (Signature)				Phone			
Date/Time				Date/Time				Fax			



Airtech Environmental Services Inc.
801A Country Club Drive
Bensenville, IL 60106
Phone: (630) 880-4740, Fax: (630) 880-4745

AIRTECH ENVIRONMENTAL SERVICES INC.
Chain of Custody

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7.25.11

Project Number		3848		Location		Esp Exhaust Unit 3		Analyte Requested		Page 1 of 1	
Client		Big River Energy		Date		Completed By		James Christ		Notes	
Field		Coleman Station									
5 Dq TAT											
ID No.	Run No.	Date	Sample Description	Metallic HAPs	Number of Containers	Carrier Laboratory	Address	Phone	Fax	Date/Time	Signature
28-R1-HMO	1		FH Rises of 0.1M HNO ₃	X	1						
28-R2-HMO	2		FH Rises of 0.1M HNO ₃	X	1						
28-R3-HMO	3		FH Rises of 0.1M HNO ₃	X	1						
28-R1-FIL	1		Quartz Fiber	X	1						
28-R2-FIL	2		Quartz Fiber	X	1						
28-R3-FIL	3		Quartz Fiber	X	1						
28-R1-SYLVIOX	1		Imp catches and ruses	X	1						
28-R2-SYLVIOX	2		Imp catches and ruses	X	1						
28-R3-SYLVIOX	3		Imp catches and ruses	X	1						
Redesignated By (signature)			Redesignated By (printed)			Carrier Laboratory			Address		
<i>[Signature]</i>			DAVID DEVERIES								
Date/Time			Date/Time			Phone			Fax		
7-25-11			7-26-11 9:30								
Accepted By (signature)			Accepted By (printed)			Date/Time			Signature		
<i>[Signature]</i>			DAVID DEVERIES								
Date/Time			Date/Time			Phone			Fax		
7-25-11			7-26-11 15:29								



Airtech Environmental Services Inc.
607A County Club Drive
Bismarck, N.D. 58108
Phone: (505) 650-4740, Fax: (505) 650-4745

AIRTECH ENVIRONMENTAL SERVICES INC.
Chain of Custody

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~~17069~~
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7.26.11

Project Number		2648		Location		Common Stock		Analyte Requested		Number of Containers		Page	
Client		Big Rivers Energy		Date		7/12/2011						1 of 1	
Plant		Coleman Station		Completed By		James Chirif							
5 D3 TAT													
ID No.	Run No.	Date	Sample Description	Metal: HAPs									
20-R1-HMO	1		FH Filter of 0.1N HNO ₃	X									
20-R2-HMO	2		FH Filter of 0.1N HNO ₃	X									
20-R3-HMO	3		FH Filter of 0.1N HNO ₃	X									
20-R1-FIL	1		Quartz Filter	X									
20-R2-FIL	2		Quartz Filter	X									
20-R3-FIL	3		Quartz Filter	X									
20-R1-SY/10%	1		Imp catches and fines	X									
20-R2-SY/10%	2		Imp catches and fines	X									
20-R3-SY/10%	3		Imp catches and fines	X									
20-R8-SY/10%	RB		5% - 10% Imp Catcher	X									
20-R9-HMO	RB		0.1N HNO ₃	X									
20-R8-FIL	RB		Quartz Filter	X									
20-R9-FIL	RB		Quartz Filter	X									
Substituted By (signature)				Substituted By (signature)				Center		Laboratory		Address	
[Signature]				[Signature]				[Signature]		[Signature]		[Signature]	
Date/Time				Date/Time				Date/Time		Date/Time		Date/Time	
Accepted By (signature)				Accepted By (signature)				Phone		Fax			
[Signature]				[Signature]				[Signature]		[Signature]			
Date/Time				Date/Time				Date/Time		Date/Time			
[Signature]				[Signature]				[Signature]		[Signature]			



Airtech Environmental Services Inc.
4015A County Club Drive
Barrington, IL 60015
Phone: (830) 880-4740, Fax: (830) 880-4745

ANALYTICAL DATA

Analytical Calculations

Metals-

$$\text{Element Results } (\mu\text{g}) = \text{ICP Results } (\mu\text{g/L}) * \text{Dilution} * \text{Final Volume (L)}$$

Where-

ICP Results= Raw sample concentration (ppb)--*ICP-Data Sheet*

Dilution= $\frac{\text{Diluted Volume}}{\text{Aliquot}}$ --*ICP-MS Run Sheet*

Final Volume= FH=Final Volume (FV)--*Sample Submission*

BH= $\frac{\text{Received Volume (BV)} * \text{Final Volume (FV)}}{\text{Aliquot (Used)}}$ --*Sample Submission*

Combined Results= FH+BH

Analytical Calculations

Spike Recovery-

$$\text{Spike (\%)} = \frac{(\text{Spiked Result } (\mu\text{g/L}) - \text{Sample Result } (\mu\text{g/L}))}{\text{Spike Amount } (\mu\text{g/L})} \times 100$$

Where-

Spike Result = Raw sample concentration (ppb)--*ICP-Data Sheet*

Sample Result = Raw sample concentration (ppb)--*ICP-Data Sheet*

Spike Amount--*ICP-MS Spike Table*

Duplicate Analysis RPD-

$$\text{RPD (\%)} = \frac{(\text{Duplicate Result } (\mu\text{g/L}) - \text{Sample Result } (\mu\text{g/L}))}{\text{Average } (\mu\text{g/L})} \times 100$$

Where-

Sample Result and Duplicate Results=Raw sample concentration (ppb)--*ICP-Data Sheet*

$$\text{Average} = \frac{(\text{Duplicate} + \text{Sample Results})}{2}$$

elementOne AIR TESTING SAMPLE SUBMISSION FORM Lab ID 17070

**FH/BH Separate Analysis
RUSH—5 DAY TAT**

Analysis Due Date 07.29.11
QA/QC/Report Due Date 08.01.11

Client Airtch Environmental Services, Inc.
Project No 3648

Date Rec 07.26.11
Time Rec 1524

HNO₃ Lot: HF Lot: HCl Lot: Ref. Method: 29
Volume Marked Y/N Volume Loss Y/N/?

Sample Identification

1	ESP 1-M29-R1	7	ESP 3-M29-R1	13	Reagent Blank (page 2)
2	ESP 1-M29-R2	8	ESP 3-M29-R2		
	ESP 1-M29-R2 Duplicate		ESP 3-M29-R2 Duplicate		
3	ESP 1-M29-R3	9	ESP 3-M29-R3		
	ESP 1-M29-R3 Spike		ESP 3-M29-R3 Spike		
4	ESP 2-M29-R1	10	Common Stack-M29-R1		
5	ESP 2-M29-R2	11	Common Stack-M29-R2		
	ESP 2-M29-R2 Duplicate		Common Stack-M29-R2 Duplicate		
6	ESP 2-M29-R3	12	Common Stack-M29-R3		
	ESP 2-M29-R3 Spike		Common Stack-M29-R3 Spike		

Analyses Requested: Samples 1-13 Sb, As, Be, Cd, Cr, Co, Pb, Mn, Ni, Se

Runs / FB	Fill / Acc (FH)		HNO ₃ (FH)			5% HNO ₃ /10% H ₂ O ₂ (BH)			HNO ₃ (A)		KMnO ₄ (B)		HCl (C)		
	pH <2.0	Y/N	pH <2.0	Y/N		pH <2.0	Y/N		pH <2.0	Y/N	pH <2.0	Y/N	pH <2.0	Y/N	
Lab ID	F# ID	BV ml	BV ml	FV ml	BV ml	Used	FV ml	BV ml	FV ml	BV ml	FV ml	BV ml	FV ml	BV ml	FV ml
1			90	100	440	220	50								
2.D			87		520	260									
3.S			107		480	240									
4			120		450	225									
5.D			95		440	220									
6.S			95		470	235									
7			93		450	225									
8.D			105		370	185									
9.S			95		445	223									
10			117		700	350									
11.D			80		620	310									
12.S			67		600	300									

Lab Communications
 LRB + spiked w/ 25ppm Std A, B (021411-A, B) 200uL FH, 100uL BH
 - KLS 7.28.11

NOTE—Run RB with job e17071 also.

SS Page 1 of 2
 7/28/2011 11:27:23 AM
 SS By AKP
 Labeled By/Date VLS 7.27.11
 FH Prep By/Date KLS 7.28.11
 BH Prep By/Date VLS 7.28.11
 BH/FH Prep By/Date KLS 7.28.11
 PM Prep By/Date —
 A Prep By/Date —
 B Prep By/Date —
 C Prep By/Date —
 ID Verification By/Date VAL 7.28.11

**FH/BH Separate Analysis
RUSH---5 DAY TAT**

Analysis Due Date 07.29.11
QA/QC/Report Due Date 08.01.11

Client Airtech Environmental Services, Inc.
Project No 3648

Date Rec 07.26.11
Time Rec 1524

HNO ₃ Lot:	HF Lot:	HCl Lot:	Ref. Method: 29
Volume Marked Y/N	Volume Loss Y/N/?		

Sample Identification

13	Reagent Blank				

Analyses Requested Sample 13 Sb, As, Be, Cd, Cr, Co, Pb, Mn, Ni, Se
NOTE: Analyze RB Filters separately

M-29 Reagent Blank

Lab ID		Fraction	BV, ml	FV, ml	Comments
13	C-7	FH Acetone Blank			
	C-8A	FH 0.1N HNO ₃	265	50	used 200ml
	C-8A	A 0.1N HNO ₃			
	C-8B	B DI H ₂ O			
	C-9	BH 5% HNO ₃ /10% H ₂ O ₂	250	50	used 125ml
	C-10	B 4% KMnO ₄ /10% H ₂ SO ₄			
	C-11	C 8N HCl DI H ₂ O			
	C-12-1	FH Filter - Quartz		50	
	C-12-2	FH Filter - Teflon		50	

Lab Communications

NOTE—Run RB with job #17071 also.

Fractions Received: C1, C3, C4—RB C12, C8a, C9—LLB 07.26.11—Analyze RB Filters Separately

SS Page 2 of 2
7/27/2011 3:56:59 PM
SS By 225
Labeled By/Date _____

FH Prep By/Date _____ A Prep By/Date _____
BH Prep By/Date _____ B Prep By/Date _____
BH/FH Prep By/Date _____ C Prep By/Date _____
PM Prep By/Date _____ ID Verification By / Date _____

Sample/Batch Report

User Name: icp
 Computer Name: D8D4DWD1
 Sample File: C:\elandata_icp\Sample\2.sam
 Report Date/Time: Monday, August 01, 2011 13:48:30

A/S Loc.	Batch ID	Sample ID	Description	Sample Type	Init. Quant.	Prep. Vol.	Aliquot Vol.	Diluted Vol.	Solids Ratio
	5	QC Std 2		Sample					
201		LRB		Sample					
202	S	LRB		Spike - 1 of 2					
203		17063-4		Sample					
204		17063-5		Sample					
205	D	17063-5		Duplicate of 5					
206		17063-5		Sample					
207	S	17063-6		Spike - 1 of 7					
208		17063-7		Sample					
209		LRB FH	AIRTECH	Sample					
210	S	LRB FH	AIRTECH	Spike - 1 of 10					
211		17070-1 FH	AIRTECH	Sample					
212		17070-2 FH	AIRTECH	Sample					
213	D	17070-2 FH	AIRTECH	Duplicate of 13					
214		17070-3 FH	AIRTECH	Sample					
215	S	17070-3 FH	AIRTECH	Spike - 1 of 15					
216		17070-4 FH	AIRTECH	Sample					
217		17070-5 FH	AIRTECH	Sample					
218	D	17070-5 FH	AIRTECH	Duplicate of 18					
219		17070-6 FH	AIRTECH	Sample					
220	S	17070-6 FH	AIRTECH	Spike - 1 of 20					
221		17070-7 FH	AIRTECH	Sample					
222		17070-8 FH	AIRTECH	Sample					
223	D	17070-8 FH	AIRTECH	Duplicate of 23					
224		17070-9 FH	AIRTECH	Sample					
225	S	17070-9 FH	AIRTECH	Spike - 1 of 25					
226		17070-10 FH	AIRTECH	Sample					
227		17070-11 FH	AIRTECH	Sample					
228	d	17070-11 FH	AIRTECH	Duplicate of 28					
229		17070-12 FH	AIRTECH	Sample					
230	s	17070-12 FH	AIRTECH	Spike - 1 of 30					
231		17070-13 FH	AIRTECH	Sample					
232		17070-13 FH	AIRTECH	Sample					
233		17070-13 FH	AIRTECH	Sample					
234		LRB BH	AIRTECH	Sample					
235	S	LRB BH	AIRTECH	Spike - 1 of 35					
236		17070-1 BH	AIRTECH	Sample					
237		17070-2 BH	AIRTECH	Sample					
238	D	17070-2 BH	AIRTECH	Duplicate of 38					
239		17070-3 BH	AIRTECH	Sample					
240	S	17070-3 BH	AIRTECH	Spike - 1 of 40					
241		17070-4 BH	AIRTECH	Sample					
242		17070-5 BH	AIRTECH	Sample					
243	D	17070-5 BH	AIRTECH	Duplicate of 43					
244		17070-6 BH	AIRTECH	Sample					
245	S	17070-6 BH	AIRTECH	Spike - 1 of 45					
246		17070-7 BH	AIRTECH	Sample					
247		17070-8 BH	AIRTECH	Sample					
248	D	17070-8 BH	AIRTECH	Duplicate of 48					

249		17070-9 BH AIRTECH	Sample
250	S	17070-9 BH AIRTECH	Spike - 1 of 50
251		17070-10 BHAIRTECH	Sample
252		17070-11 BHAIRTECH	Sample
253	D	17070-11 BHAIRTECH	Duplicate of 53
254		17070-12 BHAIRTECH	Sample
255	S	17070-12 BHAIRTECH	Spike - 1 of 55
256		17070-13 BHAIRTECH	Sample
5		QC Std 2	Sample
201	x2	17083-6	Sample
202	x2s	17083-6	Spike - 1 of 59
203	x10	17070-1 FH AIRTECH	Sample
204	x10	17070-2 FH AIRTECH	Sample
205	x10d	17070-2 FH AIRTECH	Duplicate of 62
206	x10	17070-3 FH AIRTECH	Sample
207	x10s	17070-3 FH AIRTECH	Spike - 1 of 64
208	x10	17070-4 FH AIRTECH	Sample
209	x10	17070-5 FH AIRTECH	Sample
210	x10d	17070-5 FH AIRTECH	Duplicate of 67
211	x10	17070-6 FH AIRTECH	Sample
212	x10s	17070-6 FH AIRTECH	Spike - 1 of 69
213	x10	17070-7 FH AIRTECH	Sample
214	x10	17070-8 FH AIRTECH	Sample
215	x10d	17070-8 FH AIRTECH	Duplicate of 72
216	x10	17070-9 FH AIRTECH	Sample
217	x10s	17070-9 FH AIRTECH	Spike - 1 of 74
218	x10	17070-10 FHAIRTECH	Sample
219	x5	17070-11 FHAIRTECH	Sample
220	x5d	17070-11 FHAIRTECH	Duplicate of 77
221	x5	17070-12 FHAIRTECH	Sample
222	x5s	17070-12 FHAIRTECH	Spike - 1 of 78
223	x10	17070-1 BH AIRTECH	Sample
224	x10	17070-2 BH AIRTECH	Sample
225	x10d	17070-2 BH AIRTECH	Duplicate of 82
226	x10	17070-3 BH AIRTECH	Sample
227	x10s	17070-3 BH AIRTECH	Spike - 1 of 84
228	x10	17070-4 BH AIRTECH	Sample
229	x10	17070-5 BH AIRTECH	Sample
230	x10d	17070-5 BH AIRTECH	Duplicate of 87
231	x10	17070-6 BH AIRTECH	Sample
232	x10s	17070-6 BH AIRTECH	Spike - 1 of 89
233	x10	17070-7 BH AIRTECH	Sample
234	x10	17070-8 BH AIRTECH	Sample
235	x10d	17070-8 BH AIRTECH	Duplicate of 92
236	x10	17070-9 BH AIRTECH	Sample
237	x10s	17070-9 BH AIRTECH	Spike - 1 of 94
238	x5	17070-10 BHAIRTECH	Sample
239	x5	17070-11 BHAIRTECH	Sample
240	x5d	17070-11 BHAIRTECH	Duplicate of 97
241	x5	17070-12 BHAIRTECH	Sample
242	x5s	17070-12 BHAIRTECH	Spike - 1 of 99
243	x10	17070-12FH AIRTECH	Sample
244	x10s	17070-12FH AIRTECH	Sample
245	x20	17070-3BH AIRTECH	Sample
246	x20s	17070-3BH AIRTECH	Sample
247	x20	17070-6BH AIRTECH	Sample
248	x20s	17070-6BH AIRTECH	Sample
249	x20	17070-8BH AIRTECH	Sample
250	x20s	17070-8BH AIRTECH	Sample
251	x50	17070-3BH AIRTECH	Sample

252	x50s	17070-3BH	AIRTECH	Spike - 1 of 109
253	x50	17070-8BH	AIRTECH	Sample
254	x60s	17070-8BH	AIRTECH	Spike - 1 of 111
255	x50	17070-9BH	AIRTECH	Sample
256	x50s	17070-9BH	AIRTECH	Spike - 1 of 113
257	x100	17070-3BH	AIRTECH	Sample
258	x100s	17070-3BH	AIRTECH	Spike - 1 of 115
259	x100	17070-8BH	AIRTECH	Sample
260	x100s	17070-8BH	AIRTECH	Spike - 1 of 117
201	x100	17070-9BH	AIRTECH	Sample
202	x100s	17070-9BH	AIRTECH	Spike - 1 of 119
203	x5	17062-16		Sample
204	x500	17070-3 bh	AES	Sample
205	x500s	17070-3 bh	AES	Sample
206	x500	17070-8bh	AES	Sample
207	x500s	17070-8bh	AES	Sample

Dataset Report

User Name: icp
 Computer Name: D8D4DWD1
 Dataset File Path: C:\elandata_icp\DataSet\072911-6\
 Report Date/Time: Monday, August 01, 2011 13:46:25

Depledge
8/1/11

Autosampler Position: 422

The Dataset

Time	Sample ID	Batch ID	Read Type	Description	Init. Quant	Prep. Vol.	Aliquot. Vol.	Diluted V
12:31:42 Sat 30-Jul-11	Blank		Blank					
12:34:06 Sat 30-Jul-11	Standard 1		Standard #1					
12:36:31 Sat 30-Jul-11	Standard 2		Standard #2					
12:38:56 Sat 30-Jul-11	Standard 3		Standard #3					
12:41:21 Sat 30-Jul-11	QC Std 1		QC Std #1					
12:43:46 Sat 30-Jul-11	QC Std 2		QC Std #2					
12:46:11 Sat 30-Jul-11	QC Std 3		QC Std #3					
12:48:37 Sat 30-Jul-11	QC Std 4		QC Std #4					
12:51:02 Sat 30-Jul-11	QC Std 5		QC Std #5					
12:53:27 Sat 30-Jul-11	QC Std 6		QC Std #6					
12:55:52 Sat 30-Jul-11	QC Std 7		QC Std #7					
12:58:17 Sat 30-Jul-11	QC Std 8		QC Std #8					
13:00:43 Sat 30-Jul-11	QC Std 2		Sample					
13:03:09 Sat 30-Jul-11	LRB		Sample					
13:05:34 Sat 30-Jul-11	LRB	S	Spike - 1 of 14					
13:07:59 Sat 30-Jul-11	17063-4		Sample					
13:10:24 Sat 30-Jul-11	17063-5		Sample					
13:12:48 Sat 30-Jul-11	17063-5	D	Duplicate of 17					
13:15:13 Sat 30-Jul-11	17063-6		Sample					
13:17:38 Sat 30-Jul-11	17063-6	S	Spike - 1 of 19					
13:20:03 Sat 30-Jul-11	17063-7		Sample					
13:22:27 Sat 30-Jul-11	LRB FH		Sample	AIRTECH				
13:24:52 Sat 30-Jul-11	LRB FH	S	Spike - 1 of 22	AIRTECH				
13:27:20 Sat 30-Jul-11	QC Std 1		QC Std #1					
13:29:45 Sat 30-Jul-11	QC Std 4		QC Std #4					
13:32:12 Sat 30-Jul-11	17070-1 FH		Sample	AIRTECH				
13:34:37 Sat 30-Jul-11	17070-2 FH		Sample	AIRTECH				
13:37:02 Sat 30-Jul-11	17070-2 FH	D	Duplicate of 27	AIRTECH				
13:39:27 Sat 30-Jul-11	17070-3 FH		Sample	AIRTECH				
13:41:51 Sat 30-Jul-11	17070-3 FH	S	Spike - 1 of 29	AIRTECH				
13:44:16 Sat 30-Jul-11	17070-4 FH		Sample	AIRTECH				
13:46:41 Sat 30-Jul-11	17070-5 FH		Sample	AIRTECH				
13:49:06 Sat 30-Jul-11	17070-5 FH	D	Duplicate of 32	AIRTECH				
13:51:31 Sat 30-Jul-11	17070-6 FH		Sample	AIRTECH				
13:53:56 Sat 30-Jul-11	17070-6 FH	S	Spike - 1 of 34	AIRTECH				
13:56:23 Sat 30-Jul-11	QC Std 1		QC Std #1					
13:58:46 Sat 30-Jul-11	QC Std 4		QC Std #4					
14:01:15 Sat 30-Jul-11	17070-7 FH		Sample	AIRTECH				
14:03:40 Sat 30-Jul-11	17070-8 FH		Sample	AIRTECH				
14:06:05 Sat 30-Jul-11	17070-8 FH	D	Duplicate of 39	AIRTECH				
14:08:30 Sat 30-Jul-11	17070-9 FH		Sample	AIRTECH				
14:10:55 Sat 30-Jul-11	17070-9 FH	S	Spike - 1 of 41	AIRTECH				
14:13:19 Sat 30-Jul-11	17070-10 FH		Sample	AIRTECH				

072911-1CP-6

14:15:44 Sat 30-Jul-11	17070-11 FH		Sample	AIRTECH
14:18:09 Sat 30-Jul-11	17070-11 FH	d	Duplicate of 44	AIRTECH
14:20:34 Sat 30-Jul-11	17070-12 FH		Sample	AIRTECH
14:22:59 Sat 30-Jul-11	17070-12 FH	s	Spike - 1 of 46	AIRTECH
14:25:27 Sat 30-Jul-11	QC Std 1		QC Std #1	
14:27:52 Sat 30-Jul-11	QC Std 4		QC Std #4	
14:30:19 Sat 30-Jul-11	17070-13 FH		Sample	AIRTECH
14:32:44 Sat 30-Jul-11	17070-13 Teflon		Sample	AIRTECH
14:35:08 Sat 30-Jul-11	17070-13 Quartz		Sample	AIRTECH
14:37:33 Sat 30-Jul-11	LRB BH		Sample	AIRTECH
14:39:59 Sat 30-Jul-11	LRB BH	S	Spike - 1 of 53	AIRTECH
14:42:23 Sat 30-Jul-11	17070-1 BH		Sample	AIRTECH
14:44:48 Sat 30-Jul-11	17070-2 BH		Sample	AIRTECH
14:47:12 Sat 30-Jul-11	17070-2 BH	D	Duplicate of 56	AIRTECH
14:49:37 Sat 30-Jul-11	17070-3 BH		Sample	AIRTECH
14:52:02 Sat 30-Jul-11	17070-3 BH	S	Spike - 1 of 58	AIRTECH
14:54:29 Sat 30-Jul-11	QC Std 1		QC Std #1	
14:56:54 Sat 30-Jul-11	QC Std 4		QC Std #4	
14:59:21 Sat 30-Jul-11	17070-4 BH		Sample	AIRTECH
15:01:46 Sat 30-Jul-11	17070-5 BH		Sample	AIRTECH
15:04:10 Sat 30-Jul-11	17070-5 BH	D	Duplicate of 63	AIRTECH
15:06:35 Sat 30-Jul-11	17070-6 BH		Sample	AIRTECH
15:09:00 Sat 30-Jul-11	17070-6 BH	S	Spike - 1 of 65	AIRTECH
15:11:24 Sat 30-Jul-11	17070-7 BH		Sample	AIRTECH
15:13:49 Sat 30-Jul-11	17070-8 BH		Sample	AIRTECH
15:16:14 Sat 30-Jul-11	17070-8 BH	D	Duplicate of 68	AIRTECH
15:18:39 Sat 30-Jul-11	17070-9 BH		Sample	AIRTECH
15:21:04 Sat 30-Jul-11	17070-9 BH	S	Spike - 1 of 70	AIRTECH
15:23:32 Sat 30-Jul-11	QC Std 1		QC Std #1	
15:25:57 Sat 30-Jul-11	QC Std 4		QC Std #4	
15:28:24 Sat 30-Jul-11	17070-10 BH		Sample	AIRTECH
15:30:49 Sat 30-Jul-11	17070-11 BH		Sample	AIRTECH
15:33:13 Sat 30-Jul-11	17070-11 BH	D	Duplicate of 75	AIRTECH
15:35:38 Sat 30-Jul-11	17070-12 BH		Sample	AIRTECH
15:38:02 Sat 30-Jul-11	17070-12 BH	S	Spikes - 1 of 77	AIRTECH
15:40:27 Sat 30-Jul-11	17070-13 BH		Sample	AIRTECH
15:42:55 Sat 30-Jul-11	QC Std 1		QC Std #1	
15:45:20 Sat 30-Jul-11	QC Std 4		QC Std #4	
09:31:54 Mon 01-Aug-11	Blank		Blank	
09:34:19 Mon 01-Aug-11	Standard 1		Standard #1	
09:36:44 Mon 01-Aug-11	Standard 2		Standard #2	
09:39:09 Mon 01-Aug-11	Standard 3		Standard #3	
09:41:34 Mon 01-Aug-11	QC Std 1		QC Std #1	
09:43:59 Mon 01-Aug-11	QC Std 2		QC Std #2	
09:46:24 Mon 01-Aug-11	QC Std 3		QC Std #3	
09:48:49 Mon 01-Aug-11	QC Std 4		QC Std #4	
09:51:16 Mon 01-Aug-11	QC Std 5		QC Std #5	
09:53:40 Mon 01-Aug-11	QC Std 6		QC Std #6	
09:56:05 Mon 01-Aug-11	QC Std 7		QC Std #7	
09:58:30 Mon 01-Aug-11	QC Std 8		QC Std #8	
10:00:56 Mon 01-Aug-11	QC Std 2		Sample	
10:03:23 Mon 01-Aug-11	17083-5	x2	Sample	
10:05:48 Mon 01-Aug-11	17083-5	x2s	Spikes - 1 of 95	
10:08:12 Mon 01-Aug-11	17070-1 FH	x10	Sample	AIRTECH
10:10:37 Mon 01-Aug-11	17070-2 FH	x10	Sample	AIRTECH
10:13:02 Mon 01-Aug-11	17070-2 FH	x10d	Duplicate of 98	AIRTECH

080111-1CP-1

10:15:27 Mon 01-Aug-11	17070-3 FH	x10	Sample	AIRTECH
10:17:52 Mon 01-Aug-11	17070-3 FH	x10s	Spike - 1 of 10	AIRTECH
10:20:16 Mon 01-Aug-11	17070-3 FH	x10	Sample	AIRTECH
10:22:41 Mon 01-Aug-11	17070-5 FH	x10	Sample	AIRTECH
10:25:08 Mon 01-Aug-11	17070-5 FH	x10d	Duplicate of 10	AIRTECH
10:27:34 Mon 01-Aug-11	QC Std 1		QC Std #1	
10:29:59 Mon 01-Aug-11	QC Std 4		QC Std #4	
10:32:26 Mon 01-Aug-11	17070-6 FH	x10	Sample	AIRTECH
10:34:51 Mon 01-Aug-11	17070-6 FH	x10s	Spike - 1 of 10	AIRTECH
10:37:15 Mon 01-Aug-11	17070-7 FH	x10	Sample	AIRTECH
10:39:41 Mon 01-Aug-11	17070-8 FH	x10	Sample	AIRTECH
10:42:06 Mon 01-Aug-11	17070-8 FH	x10d	Duplicate of 11	AIRTECH
10:44:30 Mon 01-Aug-11	17070-9 FH	x10	Sample	AIRTECH
10:46:55 Mon 01-Aug-11	17070-9 FH	x10s	Spike - 1 of 11	AIRTECH
10:49:20 Mon 01-Aug-11	17070-10 FH	x10	Sample	AIRTECH
10:51:45 Mon 01-Aug-11	17070-11 FH	x5	Sample	AIRTECH
10:54:10 Mon 01-Aug-11	17070-11 FH	x5d	Duplicate of 11	AIRTECH
10:56:38 Mon 01-Aug-11	QC Std 1		QC Std #1	
10:59:02 Mon 01-Aug-11	QC Std 4		QC Std #4	
11:01:30 Mon 01-Aug-11	17070-12 FH	x5	Sample	AIRTECH
11:03:55 Mon 01-Aug-11	17070-12 FH	x5s	Spike - 1 of 11	AIRTECH
11:06:20 Mon 01-Aug-11	17070-1 BH	x10	Sample	AIRTECH
11:08:45 Mon 01-Aug-11	17070-2 BH	x10	Sample	AIRTECH
11:11:10 Mon 01-Aug-11	17070-2 BH	x10d	Duplicate of 12	AIRTECH
11:13:35 Mon 01-Aug-11	17070-3 BH	x10	Sample	AIRTECH
11:16:00 Mon 01-Aug-11	17070-3 BH	x10s	Spike - 1 of 12	AIRTECH
11:18:25 Mon 01-Aug-11	17070-4 BH	x10	Sample	AIRTECH
11:20:50 Mon 01-Aug-11	17070-5 BH	x10	Sample	AIRTECH
11:23:14 Mon 01-Aug-11	17070-5 BH	x10d	Duplicate of 12	AIRTECH
11:25:42 Mon 01-Aug-11	QC Std 1		QC Std #1	
11:28:07 Mon 01-Aug-11	QC Std 4		QC Std #4	
11:30:34 Mon 01-Aug-11	17070-6 BH	x10	Sample	AIRTECH
11:32:59 Mon 01-Aug-11	17070-6 BH	x10s	Spike - 1 of 13	AIRTECH
11:35:23 Mon 01-Aug-11	17070-7 BH	x10	Sample	AIRTECH
11:37:48 Mon 01-Aug-11	17070-8 BH	x10	Sample	AIRTECH
11:40:13 Mon 01-Aug-11	17070-8 BH	x10d	Duplicate of 13	AIRTECH
11:42:37 Mon 01-Aug-11	17070-9 BH	x10	Sample	AIRTECH
11:45:02 Mon 01-Aug-11	17070-9 BH	x10s	Spike - 1 of 13	AIRTECH
11:47:27 Mon 01-Aug-11	17070-10 BH	x5	Sample	AIRTECH
11:49:52 Mon 01-Aug-11	17070-11 BH	x5	Sample	AIRTECH
11:52:16 Mon 01-Aug-11	17070-11 BH	x5d	Duplicate of 13	AIRTECH
11:54:44 Mon 01-Aug-11	QC Std 1		QC Std #1	
11:57:08 Mon 01-Aug-11	QC Std 4		QC Std #4	
11:59:38 Mon 01-Aug-11	17070-12 BH	x5	Sample	AIRTECH
12:02:00 Mon 01-Aug-11	17070-12 BH	x5s	Spike - 1 of 14	AIRTECH
12:04:25 Mon 01-Aug-11	17070-12FH	x10	Sample	AES
12:06:50 Mon 01-Aug-11	17070-12FH	x10s	Spike - 1 of 14	AES
12:09:15 Mon 01-Aug-11	17070-3BH	x20	Sample	AES
12:11:40 Mon 01-Aug-11	17070-3BH	x20s	Spike - 1 of 14	AES
12:14:04 Mon 01-Aug-11	17070-8BH	x20	Sample	AES
12:16:29 Mon 01-Aug-11	17070-8BH	x20s	Spike - 1 of 14	AES
12:18:54 Mon 01-Aug-11	17070-9BH	x20	Sample	AES
12:21:19 Mon 01-Aug-11	17070-9BH	x20s	Spike - 1 of 15	AES
12:23:46 Mon 01-Aug-11	QC Std 1		QC Std #1	
12:26:11 Mon 01-Aug-11	QC Std 4		QC Std #4	
12:29:18 Mon 01-Aug-11	17070-3BH	x50	Sample	AIRTECH

12:31:43 Mon 01-Aug-11	17070-3BH	x50s	Spike - 1 of 155AIRTECH
12:34:06 Mon 01-Aug-11	17070-4BH	x50	Sample AIRTECH
12:36:33 Mon 01-Aug-11	17070-4BH	x50s	Spike - 1 of 157AIRTECH
12:36:57 Mon 01-Aug-11	17070-4BH	x50	Sample AIRTECH
12:41:22 Mon 01-Aug-11	17070-4BH	x50s	Spike - 1 of 156AIRTECH
12:43:50 Mon 01-Aug-11	QC Std 1		QC Std #1
12:46:15 Mon 01-Aug-11	QC Std 4		QC Std #4
12:54:33 Mon 01-Aug-11	17070-3BH	x100	Sample AIRTECH
12:56:58 Mon 01-Aug-11	17070-3BH	x100s	Spike - 1 of 163AIRTECH
12:59:23 Mon 01-Aug-11	17070-4BH	x100	Sample AIRTECH
13:01:48 Mon 01-Aug-11	17070-4BH	x100s	Spike - 1 of 165AIRTECH
13:04:14 Mon 01-Aug-11	17070-4BH	x100	Sample AIRTECH
13:06:39 Mon 01-Aug-11	17070-4BH	x100s	Spike - 1 of 167AIRTECH
13:09:04 Mon 01-Aug-11	17062-16	x5	Sample
13:11:29 Mon 01-Aug-11	17070-3 bh	x500	Sample AES
13:13:54 Mon 01-Aug-11	17070-3 bh	x500s	Spike - 1 of 171AES
13:16:18 Mon 01-Aug-11	17070-4bh	x500	Sample AES
13:18:46 Mon 01-Aug-11	QC Std 1		QC Std #1
13:21:10 Mon 01-Aug-11	QC Std 4		QC Std #4
13:23:38 Mon 01-Aug-11	17070-4bh	x600s	Spike - 1 of 172AES
13:26:05 Mon 01-Aug-11	QC Std 1		QC Std #1
13:28:30 Mon 01-Aug-11	QC Std 4		QC Std #4

A/S Loc.	Dilution	Sample ID	Client	Type	Weight (g)	Prep Vol (ml)
5		QC Std 2		Sample		
201		LRB		Sample		100
202	S	LRB		Spike - 1 of 2		100
203		17063-4		Sample		100x2
204		17063-6		Sample		100x2
205	D	17063-5		Duplicate of 5		100x2
206		17063-8		Sample		100x2
207	S	17063-6		Spike - 1 of 7		100x2
208		17063-7		Sample		100x2
209		LRB FH	AIRTECH	Sample		100
210	S	LRB FH	AIRTECH	Spike - 1 of 10		100
211		17070-1 FH	AIRTECH	Sample		100
212		17070-2 FH	AIRTECH	Sample		100
213	D	17070-2 FH	AIRTECH	Duplicate of 13		100
214		17070-3 FH	AIRTECH	Sample		100
215	S	17070-3 FH	AIRTECH	Spike - 1 of 15		100
216		17070-4 FH	AIRTECH	Sample		100
217		17070-5 FH	AIRTECH	Sample		100
218	D	17070-5 FH	AIRTECH	Duplicate of 16		100
219		17070-6 FH	AIRTECH	Sample		100
220	S	17070-6 FH	AIRTECH	Spike - 1 of 20		100
221		17070-7 FH	AIRTECH	Sample		100
222		17070-8 FH	AIRTECH	Sample		100
223	D	17070-8 FH	AIRTECH	Duplicate of 23		100
224		17070-9 FH	AIRTECH	Sample		100
225	S	17070-9 FH	AIRTECH	Spike - 1 of 25		100
226		17070-10 FH	AIRTECH	Sample		100
227		17070-11 FH	AIRTECH	Sample		100
228	d	17070-11 FH	AIRTECH	Duplicate of 28		100
229		17070-12 FH	AIRTECH	Sample		100
230	s	17070-12 FH	AIRTECH	Spike - 1 of 30		100
231		17070-13 FH	AIRTECH	Sample		100
232		17070-13 Teflon	AIRTECH	Sample		50
233		17070-13 Quartz	AIRTECH	Sample		50
234		LRB BH	AIRTECH	Sample		50
235	S	LRB BH	AIRTECH	Spike - 1 of 35		50
236		17070-1 BH	AIRTECH	Sample		50x2
237		17070-2 BH	AIRTECH	Sample		50x2
238	D	17070-2 BH	AIRTECH	Duplicate of 38		50x2
239		17070-3 BH	AIRTECH	Sample		50x2
240	S	17070-3 BH	AIRTECH	Spike - 1 of 40		50x2
241		17070-4 BH	AIRTECH	Sample		50x2
242		17070-5 BH	AIRTECH	Sample		50x2
243	D	17070-5 BH	AIRTECH	Duplicate of 43		50x2
244		17070-6 BH	AIRTECH	Sample		50x2
245	S	17070-6 BH	AIRTECH	Spike - 1 of 45		50x2
246		17070-7 BH	AIRTECH	Sample		50x2
247		17070-8 BH	AIRTECH	Sample		50x2
248	D	17070-8 BH	AIRTECH	Duplicate of 48		50x2
249		17070-9 BH	AIRTECH	Sample		50x2
250	S	17070-9 BH	AIRTECH	Spike - 1 of 50		50x2
251		17070-10 BH	AIRTECH	Sample		50x2
252		17070-11 BH	AIRTECH	Sample		50x2
253	D	17070-11 BH	AIRTECH	Duplicate of 53		50x2
254		17070-12 BH	AIRTECH	Sample		50x2
255	S	17070-12 BH	AIRTECH	Spike - 1 of 55		50x2
256		17070-13 BH	AIRTECH	Sample		50x2
5		QC Std 2		Sample		100
201	x2	17063-6		Sample		100x2
202	x2s	17063-6		Spike - 1 of 59		100x2
203	x10	17070-1 FH	AIRTECH	Sample		100
204	x10	17070-2 FH	AIRTECH	Sample		100
206	x10d	17070-2 FH	AIRTECH	Duplicate of 62		100
206	x10	17070-3 FH	AIRTECH	Sample		100
207	x10a	17070-3 FH	AIRTECH	Spike - 1 of 64		100
208	x10	17070-4 FH	AIRTECH	Sample		100
209	x10	17070-5 FH	AIRTECH	Sample		100

elementOne

Analyst: --dbw--

ICP-MS RUN SHEET
8/1/2011

Job Number:

A/S Loc.	Dilution	Sample ID	Client	Type	Weight (g)	Prep Vol (ml)
210	x10d	17070-5 FH	AIRTECH	Duplicate of 67		100
211	x10	17070-6 FH	AIRTECH	Sample		100
212	x10s	17070-6 FH	AIRTECH	Spits - 1 of 69		100
213	x10	17070-7 FH	AIRTECH	Sample		100
214	x10	17070-8 FH	AIRTECH	Sample		100
215	x10d	17070-8 FH	AIRTECH	Duplicate of 72		100
216	x10	17070-9 FH	AIRTECH	Sample		100
217	x10s	17070-9 FH	AIRTECH	Spits - 1 of 74		100
218	x10	17070-10 FH	AIRTECH	Sample		100
219	x5	17070-11 FH	AIRTECH	Sample		100
220	x5d	17070-11 FH	AIRTECH	Duplicate of 77		100
221	x5	17070-12 FH	AIRTECH	Sample		100
222	x5s	17070-12 FH	AIRTECH	Spits - 1 of 79		100
223	x10	17070-1 BH	AIRTECH	Sample		50x2
224	x50	17070-2 BH	AIRTECH	Sample		50x2
225	x10d	17070-2 BH	AIRTECH	Duplicate of 82		50x2
226	x10	17070-3 BH	AIRTECH	Sample		50x2
227	x10s	17070-3 BH	AIRTECH	Spits - 1 of 84		50x2
228	x10	17070-4 BH	AIRTECH	Sample		50x2
229	x10	17070-5 BH	AIRTECH	Sample		50x2
230	x10d	17070-5 BH	AIRTECH	Duplicate of 87		50x2
231	x10	17070-6 BH	AIRTECH	Sample		50x2
232	x10s	17070-6 BH	AIRTECH	Spits - 1 of 89		50x2
233	x10	17070-7 BH	AIRTECH	Sample		50x2
234	x10	17070-8 BH	AIRTECH	Sample		50x2
235	x10d	17070-8 BH	AIRTECH	Duplicate of 92		50x2
236	x10	17070-9 BH	AIRTECH	Sample		50x2
237	x10s	17070-9 BH	AIRTECH	Spits - 1 of 94		50x2
238	x5	17070-10 BH	AIRTECH	Sample		50x2
239	x5	17070-11 BH	AIRTECH	Sample		50x2
240	x5d	17070-11 BH	AIRTECH	Duplicate of 97		50x2
241	x5	17070-12 BH	AIRTECH	Sample		50x2
242	x5s	17070-12 BH	AIRTECH	Spits - 1 of 99		50x2
243	x10	17070-12FH	AIRTECH	Sample		100
244	x10s	17070-12FH	AIRTECH	Sample		100
245	x20	17070-3BH	AIRTECH	Sample		100
246	x20s	17070-3BH	AIRTECH	Sample		50x2
247	x20	17070-6BH	AIRTECH	Sample		50x2
248	x20s	17070-6BH	AIRTECH	Sample		50x2
249	x20	17070-9BH	AIRTECH	Sample		50x2
250	x20s	17070-9BH	AIRTECH	Sample		50x2
251	x90	17070-3BH	AIRTECH	Sample		50x2
252	x50s	17070-3BH	AIRTECH	Spits - 1 of 106		50x2
253	x50	17070-6BH	AIRTECH	Sample		50x2
254	x50s	17070-6BH	AIRTECH	Spits - 1 of 111		50x2
255	x50	17070-9BH	AIRTECH	Sample		50x2
256	x50s	17070-9BH	AIRTECH	Spits - 1 of 113		50x2
257	x100	17070-3BH	AIRTECH	Sample		50x2
258	x100s	17070-3BH	AIRTECH	Spits - 1 of 115		50x2
259	x100	17070-6BH	AIRTECH	Sample		50x2
260	x100s	17070-6BH	AIRTECH	Spits - 1 of 117		50x2
261	x100	17070-9BH	AIRTECH	Sample		50x2
262	x100s	17070-9BH	AIRTECH	Spits - 1 of 119		50x2
263	x5	17062-16		Sample		100x2
264	x500	17070-3 bh	AES	Sample		50x2
265	x500s	17070-3 bh	AES	Sample		50x2
266	x500	17070-6bh	AES	Sample		50x2
267	x500s	17070-6bh	AES	Sample		50x2

Spits are post at 0.02mL of 25ppm spiking solutions lot 021419-A&B in a final volume of 10mL

Submitted for QC by:	Date/Time:	QC Review By:	Date/Time:
dbw	8/1/11 14:14	8/1/11 DBW	9:00
Re-Test Required:	No: <input checked="" type="checkbox"/>	Yes:	Comments:
Resubmitted for QC by:	Date/Time:	QC Review:	By: Date/Time:

	Analyte	Rate (amu)	Spike Table 1 (Conc.)	Spike Table 1 Det. Limit	Spike Table 2 (Conc.)	Spike Table 2 Det. Limit (Conc.)	Spike Table 3 (Conc.)	Spike Table 3 Det. Limit (Conc.)	Spike Table 4 (Conc.)	Spike Table 4 Det. Limit (Conc.)	Spike Table 5 (Conc.)
1	07.2	50	1	25	1	100	1				
2	41.265	50	1	25	1	100	1				
3	110.44										
4	11.14	50	1	25	1	100	1				
5	51.475	50	1	25	1	100	1				
6	51.377	50	1	25	1	100	1				
7	14.71	50	1	25	1	100	1				
8	50.932	50	1	25	1	100	1				
9	19.967	50	1	25	1	100	1				
10	19.090	50	1	25	1	100	1				
11	14.421	50	1	25	1	100	1				
12	14.4216	50	1	25	1	100	1				
13	11.3151	50	1	25	1	100	1				
14	11.7167	50	1	25	1	100	1				
15	11.1174	50	1	25	1	100	1				
16	11.1174	50	1	25	1	100	1				
17	11.1174	50	1	25	1	100	1				
18	11.1174	50	1	25	1	100	1				
19	11.1174	50	1	25	1	100	1				
20	11.1174	50	1	25	1	100	1				
21	11.1174	50	1	25	1	100	1				

Monday, Aug 01, 2011 01:46 PM

ICP Standards and QC Standards Values Table

Element or Test	Mass	Symbol	Std.#1 ppb	Std.#2 ppb	Std.#3 ppb	QC #1	QC #2	QC #3	QC #4	QC #6 A	QC #7 AB	QC #8 .25	QC #9 LRB	QC #10 LRB+	QC #11 LRB+
<i>Lithium</i>	6	<i>Li</i>													
Lithium	7	Li	1	100	500	0	1	250	100				0	50	100
Beryllium	9	Be	1	100	500	0	1	250	100			0.25	0	50	100
Boron	10	B	1	50	100	0	1	250	100				0	50	100
Boron	11	B	1	50	100	0	1	250	100				0	50	100
Sodium	23	Na	20	1100	5500	0	21	2500	1100				0	718	
Magnesium	24	Mg	20	1100	5500	0	21	2500	1100				0	550	
Magnesium	25	Mg	20	1100	5500	0	21	2500	1100				0	550	
Aluminum	27	Al	1	100	500	0	1	250	100				0	50	100
Phosphorus	31	P	20	1000	5000	0	20	2500	1000				0	200	
Potassium	39	K	20	1100	5500	0	21	2500	1100				0	500	
Calcium	44	Ca	50	1100	5500	0	21	2500	1100				0	550	
<i>Scandium</i>	45														
Titanium	47	Ti	1	100	500	0	1	250	100				0	50	100
Titanium	48	Ti	1	100	500	0	1	250	100				0	50	100
Vanadium	51	V	1	100	500	0	1	250	100	0	20		0	50	100
Vanadium	51	V	1	100	500	0	1	250	100	0	20		0	50	100
Chromium	52	Cr	1	100	500	0	1	250	100		10		0	50	100
Chromium	53	Cr	1	100	500	0	1	250	100		10		0	50	100
Iron	54	Fe	20	1100	5500	0	21	2500	1100	0			0		
Manganese	55	Mn	1	100	500	0	1	250	100	0	10		0	50	100
Iron	57	Fe	20	1100	5500	0	21	2500	1100	0			0		
Cobalt	58	Co	1	100	500	0	1	250	100	0	20		0	50	100
Nickel	60	Ni	1	100	500	0	1	250	100	0	20		0	50	100
Copper	63	Cu	1	100	500	0	1	250	100	0	10		0	50	100
Copper	65	Cu	1	100	500	0	1	250	100	0	10		0	50	100
Zinc	66	Zn	1	100	500	0	1	250	100	0	10		0	50	100
Zinc	67	Zn	1	100	500	0	1	250	100	0	10		0	50	100
Zinc	68	Zn	1	100	500	0	1	250	100	0	10		0	50	100
Germanium	72	Ge	1	100	500	0	1	250	100				0	50	100
Arsenic	75	As	1	100	500	0	1	250	100	0	10		0	50	100
Selenium	77	Se	1	100	500	0	1	250	100	0	10		0	50	100
Selenium	82	Se	1	100	500	0	1	250	100	0	10		0	50	100
Strontium	88	Sr	1	100	500	0	1	250	100	0			0	50	100
Molybdenum	95	Mo	1	100	500	0	1	250	100				0	50	100
Molybdenum	97	Mo	1	100	500	0	1	250	100				0	50	100
Molybdenum	98	Mo	1	100	500	0	1	200	100				0	50	100
<i>Rhodium</i>	103														
Silver	107	Ag	1	100	500	0	1	250	100	0	10		0	50	100
Silver	109	Ag	1	100	500	0	1	250	100	0	10		0	50	100
Cadmium	111	Cd	1	100	500	0	1	250	100	0	5		0	50	100
Cadmium	114	Cd	1	100	500	0	1	250	100	0	5		0	50	100
Tin	118	Sn	1	100	500	0	1	250	100	0			0	50	100
Antimony	121	Sb	1	100	500	0	1	250	100	0			0	50	100
Antimony	123	Sb	1	100	500	0	1	250	100	0			0	50	100
Tellurium	128	Te	1	100	500	0	1	250	100				0	50	100
<i>Cesium</i>	133														
Barium	135	Ba	1	100	500	0	1	250	100	0			0	50	100
Barium	137	Ba	1	100	500	0	1	250	100	0			0	50	100
Lanthanum	139	La	1	100	500	0	1	250	100				0	50	100
Tantalum	159	Ta	1	100	500	0	1	250	100				0	50	100
Platinum	195	Pt	1	100	500	0	1	250	100				0	50	100
Gold	181	Au	1	100	500	0	1	250	100				0	50	100
Thallium	205	Tl	1	100	500	0	1	250	100	0			0	50	100
Lead	208	Pb	1	100	500	0	1	250	100	0			0	50	100
Bismuth	209	Bi	1	100	500	0	1	250	100				0	50	100
Thorium	232	Th	1	100	500	0	1	250	100				0	50	100
Uranium	238	U	1	100	500	0	1	250	100				0	50	100
Krypton	83														

elementOne

elementOne

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: Blank

Sample Date: Saturday, July 30, 2011 12:31:42

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	73237		ppb
Be	9	47.7		ppb
Sc	45	305323.4		ppb
V-1	51	156200.4		ppb
V	51	147973		ppb
Cr	52	16721		ppb
Cr	53	54221.3		ppb
Mn	55	28161.2		ppb
Co	59	1851.5		ppb
Ni	60	1258.8		ppb
Cu	63	4986		ppb
Cu	65	2269.3		ppb
As	75	-737		ppb
Se	77	6607.7		ppb
Se	82	44.4		ppb
Rh	103	902352.2		ppb
Cd	111	470.9		ppb
Cd	114	1094.8		ppb
Sb	121	1743.5		ppb
Sb	123	1359.5		ppb
Ho	165	1826778.5		ppb
Tl	205	5275.5		ppb
Pb	208	18000.6		ppb
Kr	83	106.5		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: Standard 1

Sample Date: Saturday, July 30, 2011 12:34:06

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	74215.6		ppb
Be	9	602.7	1.26288	ppb
Sc	45	304865.9		ppb
V-1	51	150054.9	-0.1432	ppb
V	51	161458.2	0.37986	ppb
Cr	52	31280.4	0.82965	ppb
Cr	53	47361.1	-2.8056	ppb
Mn	55	52020.4	0.85877	ppb
Co	59	23116	1.02496	ppb
Ni	60	5570.4	0.9977	ppb
Cu	63	14344.3	0.92846	ppb
Cu	65	6985.7	0.93638	ppb
As	75	2973.5	1.18572	ppb
Se	77	5704.1	-3.19111	ppb
Se	82	418.1	1.20869	ppb
Rh	103	884748.8		ppb
Cd	111	6092.9	1.25364	ppb
Cd	114	13994.3	1.23183	ppb
Sb	121	20947.8	1.23246	ppb
Sb	123	16279.6	1.2488	ppb
Ho	165	1812519.8		ppb
Tl	205	78760.1	1.16151	ppb
Pb	208	115320	1.14171	ppb
Kr	83	-223.1		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: Standard 2

Sample Date: Saturday, July 30, 2011 12:36:31

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	70403.1			ppb
- Be	9	45078.8	107.99808		ppb
- Sc	45	293866.6			ppb
- V-1	51	1562035.7	67.92055		ppb
- V	51	2943310.6	67.55708		ppb
- Cr	52	1270455	72.48243		ppb
- Cr	53	198121.4	73.37064		ppb
- Mn	55	2056083.4	74.0367		ppb
- Co	59	1651628.8	82.11599		ppb
- Ni	60	353729.4	83.78487		ppb
- Cu	63	812844.4	82.04349		ppb
- Cu	65	381300.9	77.26725		ppb
- As	75	266485	88.3303		ppb
- Se	77	26505.9	85.7546		ppb
- Se	82	28533	94.4727		ppb
> Rh	103	864052.4			ppb
- Cd	111	435057	99.18047		ppb
- Cd	114	1019919.6	99.59515		ppb
- Sb	121	1495816.8	98.81235		ppb
- Sb	123	1163015.4	100.15212		ppb
> Ho	165	1761423.9			ppb
- Tl	205	5876705.2	95.8334		ppb
- Pb	208	7752668.3	93.6949		ppb
- Kr	83	-26179.6			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: Standard 3

Sample Date: Saturday, July 30, 2011 12:38:56

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	66567.5			ppb
- Be	9	205317.7	499.28904		ppb
- Sc	45	281675.1			ppb
- V-1	51	6795203.1	500.63553		ppb
- V	51	13352470	500.65602		ppb
- Cr	52	5610145.7	499.57636		ppb
- Cr	53	694709.6	499.44208		ppb
- Mn	55	9227888	499.89779		ppb
- Co	59	7656940	500.33459		ppb
- Ni	60	1587175.6	499.74329		ppb
- Cu	63	3786215.1	500.49627		ppb
- Cu	65	1710224.4	499.77187		ppb
- As	75	1249467	500.49353		ppb
- Se	77	97696.7	499.99413		ppb
- Se	82	128303.5	499.76151		ppb
> Rh	103	787649.4			ppb
> Cd	111	1935724.6	499.54199		ppb
- Cd	114	4644275.2	499.99611		ppb
- Sb	121	7058950.8	498.90442		ppb
- Sb	123	5477177.8	498.86416		ppb
> Ho	165	1758697.9			ppb
- Tl	205	28707690	499.59279		ppb
- Pb	208	37511829	499.42973		ppb
- Kr	83	-115169.9			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Saturday, July 30, 2011 12:41:21

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	69004.9		ppb
Be	9	54	0.02259	ppb
Sc	45	284051.8		ppb
V-1	51	150638.2	0.13317	ppb
V	51	142013.4	0.04004	ppb
Cr	52	15708.9	-0.01717	ppb
Cr	53	51967.5	0.24143	ppb
Mn	55	26222.8	-0.0291	ppb
Co	59	1791.2	0.00219	ppb
Ni	60	1166.1	-0.00885	ppb
Cu	63	4976.4	0.02889	ppb
Cu	65	2227.6	0.01862	ppb
As	75	-130.8	0.21256	ppb
Se	77	6309.5	0.08862	ppb
Se	82	39.3	-0.00942	ppb
Rh	103	859444.1		ppb
Cd	111	444.8	-0.00061	ppb
Cd	114	1024.9	-0.00132	ppb
Sb	121	1513.1	-0.0129	ppb
Sb	123	1172.8	-0.0136	ppb
Ho	165	1782355.9		ppb
Tl	205	7512.6	0.04083	ppb
Pb	208	18790.1	0.0164	ppb
Kr	83	115		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 2

Sample Date: Saturday, July 30, 2011 12:43:46

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	68313.3		ppb
Be	9	476.3	1.02348	ppb
Sc	45	283791.7		ppb
V-1	51	148683.2	0.20906	ppb
V	51	155039.9	0.60257	ppb
Cr	52	27433	0.988	ppb
Cr	53	48126.4	-1.76748	ppb
Mn	55	44851.8	0.94335	ppb
Co	59	18070.3	0.99898	ppb
Ni	60	4436.7	0.96138	ppb
Cu	63	11364.1	0.83093	ppb
Cu	65	5616.1	0.9556	ppb
As	75	2366	1.14308	ppb
Se	77	5592.1	-2.9075	ppb
Se	82	284	0.88434	ppb
Rh	103	842274.1		ppb
Cd	111	4765	1.04448	ppb
Cd	114	11133.2	1.01818	ppb
Sb	121	16311.3	1.03529	ppb
Sb	123	12447.5	1.0155	ppb
Ho	165	1757690		ppb
Tl	205	64182.8	1.02929	ppb
Pb	208	93190.2	1.01094	ppb
Kr	83	-121.1		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 3

Sample Date: Saturday, July 30, 2011 12:46:11

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	68650.1		ppb
	Be	9	105514.5	248.72307	ppb
	Sc	45	286399		ppb
	V-1	51	3651815	254.94189	ppb
	V	51	7112931.4	255.22318	ppb
	Cr	52	3015918	258.77901	ppb
	Cr	53	401511.4	262.72244	ppb
	Mn	55	4819955.4	251.54375	ppb
	Co	59	4012117.6	253.19308	ppb
	Ni	60	828207.1	251.72988	ppb
	Cu	63	1918091.1	244.64214	ppb
	Cu	65	897907.8	253.16242	ppb
	As	75	643005.6	248.93174	ppb
	Se	77	53401.8	249.25014	ppb
	Se	82	65310.2	245.66386	ppb
>	Rh	103	815495.1		ppb
	Cd	111	1005596.7	250.64313	ppb
	Cd	114	2397611.5	249.27312	ppb
	Sb	121	3637417.6	254.5669	ppb
	Sb	123	2784564.4	251.11237	ppb
>	Ho	165	1775954.9		ppb
	Tl	205	14570220	251.04002	ppb
	Pb	208	19170644	252.57911	ppb
	Kr	83	-59768.2		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Saturday, July 30, 2011 12:48:37

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	65719.8		ppb
	Be	9	41953.6	103.25005	ppb
	Sc	45	274951.1		ppb
	V-1	51	1481562.9	98.22549	ppb
	V	51	2771325.8	97.29456	ppb
	Cr	52	1165594.6	100.05236	ppb
	Cr	53	193177.3	108.62027	ppb
	Mn	55	1865969.8	97.38851	ppb
	Co	59	1585529.7	100.8508	ppb
	Ni	60	340718.3	104.21819	ppb
	Cu	63	786578.6	100.81547	ppb
	Cu	65	361694.1	102.4974	ppb
	As	75	259568.3	101.47389	ppb
	Se	77	25818.3	105.40527	ppb
	Se	82	26500	100.41551	ppb
>	Rh	103	808811		ppb
	Cd	111	408413.7	102.58397	ppb
	Cd	114	970761.9	101.74106	ppb
	Sb	121	1424036.5	101.77797	ppb
	Sb	123	1083254.9	99.76316	ppb
>	Ho	165	1737773.1		ppb
	Tl	205	5878347.1	103.44968	ppb
	Pb	208	7683855.8	103.32237	ppb
	Kr	83	-24526.8		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 5

Sample Date: Saturday, July 30, 2011 12:51:02

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	69962.7			ppb
- Be	9	21599.3	49.87539		ppb
- Sc	45	294951.2			ppb
- V-1	51	828604.3	47.57149		ppb
- V	51	1495848.7	47.67707		ppb
- Cr	52	602419.8	48.62044		ppb
- Cr	53	119356.1	48.95252		ppb
- Mn	55	963315.9	47.23282		ppb
- Co	59	795479.2	48.15253		ppb
- Ni	60	171666.5	49.85891		ppb
- Cu	63	400828.1	48.66213		ppb
- Cu	65	188583.1	50.63395		ppb
- As	75	129365.5	48.33084		ppb
- Se	77	15059.5	44.65358		ppb
- Se	82	13325.3	48.03943		ppb
> Rh	103	848608.4			ppb
- Cd	111	208123.4	49.75674		ppb
- Cd	114	490546.3	48.92853		ppb
- Sb	121	727147.5	50.30297		ppb
- Sb	123	557591.4	49.70443		ppb
> Ho	165	1793121.9			ppb
- Tl	205	2874645.2	48.98075		ppb
- Pb	208	3831498.8	49.81338		ppb
- Kr	83	140.4			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 6

Sample Date: Saturday, July 30, 2011 12:53:27

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	68808.6			ppb
- Be	9	10.3	-0.08129		ppb
- Sc	45	286551.3			ppb
- V-1	51	151255.7	2.4343		ppb
- V	51	146029.2	1.27734		ppb
- Cr	52	27092	1.39414		ppb
- Cr	53	52859.9	8.97354		ppb
- Mn	55	73133.1	3.08915		ppb
- Co	59	14536.3	0.95268		ppb
- Ni	60	10367.9	3.294		ppb
- Cu	63	17691.2	2.0325		ppb
- Cu	65	9131.6	2.39884		ppb
- As	75	-1824.7	-0.55335		ppb
- Se	77	8832.3	22.24347		ppb
- Se	82	-74	-0.47199		ppb
> Rh	103	707030.9			ppb
- Cd	111	1283	0.26244		ppb
- Cd	114	9036	0.98293		ppb
- Sb	121	1563.5	-0.00935		ppb
- Sb	123	1187.6	-0.01229		ppb
> Ho	165	1776404.7			ppb
- Tl	205	2305.6	-0.04876		ppb
- Pb	208	56987.4	0.52078		ppb
- Kr	83	132			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 7

Sample Date: Saturday, July 30, 2011 12:55:52

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	56033.6			ppb
- Be	9	2110.6	5.99629		ppb
- Sc	45	241359.1			ppb
- V-1	51	449046.2	34.5911		ppb
- V	51	732646.1	31.94962		ppb
- Cr	52	175681.8	19.53402		ppb
- Cr	53	72039.3	37.33134		ppb
- Mn	55	275001.1	18.50925		ppb
- Co	59	335980	29.06897		ppb
- Ni	60	70800.4	29.29024		ppb
- Cu	63	102300.1	17.41043		ppb
- Cu	65	48380.7	18.22925		ppb
- As	75	30188.4	16.32225		ppb
- Se	77	11307.7	50.40492		ppb
- Se	82	3095.8	15.88097		ppb
> Rh	103	593040.7			ppb
- Cd	111	31977.9	10.85485		ppb
- Cd	114	80626.2	11.42903		ppb
- Sb	121	68213	5.51398		ppb
- Sb	123	52922.9	5.51244		ppb
> Ho	165	1505782.2			ppb
- Tl	205	347448.5	6.97399		ppb
- Pb	208	448278.6	6.74123		ppb
- Kr	83	-1098.1			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 8

Sample Date: Saturday, July 30, 2011 12:58:17

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	80240.2			ppb
- Be	9	150	0.19725		ppb
- Sc	45	348766.8			ppb
- V-1	51	216427.4	2.38891		ppb
- V	51	205694.7	1.1592		ppb
- Cr	52	29359.7	0.73305		ppb
- Cr	53	75213.6	8.56091		ppb
- Mn	55	29172.4	-0.10429		ppb
- Co	59	6325.5	0.21554		ppb
- Ni	60	14124.3	3.11128		ppb
- Cu	63	28715.6	2.37644		ppb
- Cu	65	13637.6	2.52082		ppb
- As	75	-307.8	0.16337		ppb
- Se	77	9825	10.15159		ppb
- Se	82	88.9	0.11864		ppb
> Rh	103	1014013.8			ppb
- Cd	111	1604.2	0.21553		ppb
- Cd	114	3520.2	0.19155		ppb
- Sb	121	6005	0.20131		ppb
- Sb	123	4591.8	0.19605		ppb
> Ho	165	2334053.2			ppb
- Tl	205	23368.3	0.2181		ppb
- Pb	208	78240.7	0.5543		ppb
- Kr	83	8.7			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 2

Sample Date: Saturday, July 30, 2011 13:00:43

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	49601.9		ppb
Be	9	386	1.15452	ppb
Sc	45	225284.4		ppb
V-1	51	165235.9	4.67838	ppb
V	51	167837.4	2.74645	ppb
Cr	52	23832.9	1.25423	ppb
Cr	53	53693.8	13.26524	ppb
Mn	55	33134.9	0.82793	ppb
Co	59	14101.9	1.00215	ppb
Ni	60	3513	0.98403	ppb
Cu	63	9243	0.89408	ppb
Cu	65	4272.3	0.92245	ppb
As	75	1491.3	0.97337	ppb
Se	77	6277.2	9.66091	ppb
Se	82	219.4	0.87614	ppb
Rh	103	655379		ppb
Cd	111	3374.1	0.94044	ppb
Cd	114	7779.7	0.90406	ppb
Sb	121	11731.2	0.88247	ppb
Sb	123	8948.6	0.86479	ppb
Ho	165	1457010.4		ppb
Tl	205	57939.1	1.12873	ppb
Pb	208	84015	1.11964	ppb
Kr	83	-89.1		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: LRB FH

Sample Date: Saturday, July 30, 2011 13:22:27

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	66042		ppb
Be	9	7	-0.08818	ppb
Sc	45	308423.5		ppb
Cr	52	51645.6	3.27799	ppb
Cr	53	13876.7	-25.85591	ppb
Mn	55	89129.5	3.47446	ppb
Co	59	869.4	-0.04921	ppb
Ni	60	5303.9	1.31489	ppb
As	75	814.4	0.58164	ppb
Se	77	625	-27.98133	ppb
Se	82	101.9	0.2438	ppb
Rh	103	792919		ppb
Cd	111	695.3	0.07216	ppb
Cd	114	473.1	-0.05223	ppb
Sb	121	827457.4	58.20411	ppb
Sb	123	643469.6	58.32641	ppb
Ho	165	1764202.7		ppb
Pb	208	143449.9	1.67367	ppb
Kr	83	-552		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: LRB FH

Sample Date: Saturday, July 30, 2011 13:24:52

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	53681.3			ppb
Be	9	14004.8	42.13607		ppb
Sc	45	205072.8			ppb
Cr	52	553837.6	58.34437		ppb
Cr	53	72333.9	30.76974		ppb
Mn	55	810256.5	51.75779		ppb
Co	59	600235.5	47.22124		ppb
Ni	60	155260.1	58.67847		ppb
As	75	83266.5	40.47711		ppb
Se	77	5917.9	7.44592		ppb
Se	82	7303.7	34.17194		ppb
Rh	103	652941.8			ppb
Cd	111	127748.9	39.67323		ppb
Cd	114	296367.7	38.40598		ppb
Sb	121	338406	28.49602		ppb
Sb	123	262616.4	28.49418		ppb
Ho	165	1471109.1			ppb
Pb	208	3262744.1	51.72438		ppb
Kr	83	20.8			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Saturday, July 30, 2011 13:27:20

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	49282			ppb
Be	9	20	-0.03946		ppb
Sc	45	205591.7			ppb
V-1	51	117024.8	1.09746		ppb
V	51	109468.5	0.4558		ppb
Cr	52	13180.6	0.2144		ppb
Cr	53	40861	4.15108		ppb
Mn	55	17245.3	-0.12647		ppb
Co	59	657.4	-0.05012		ppb
Ni	60	736.4	-0.0465		ppb
Cu	63	3154.2	-0.03742		ppb
Cu	65	1592.5	0.0217		ppb
As	75	-1291.9	-0.40774		ppb
Se	77	6883.3	16.93705		ppb
Se	82	10.1	-0.09931		ppb
Rh	103	610518.3			ppb
Cd	111	143.4	-0.05826		ppb
Cd	114	315.7	-0.05898		ppb
Sb	121	611.7	-0.06135		ppb
Sb	123	431.5	-0.06716		ppb
Ho	165	1327435.8			ppb
Tl	205	2153.3	-0.0387		ppb
Pb	208	11543.9	-0.02701		ppb
Kr	83	88.3			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Saturday, July 30, 2011 13:29:45

Sample Description:

Concentration Results

	Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
>	Li	6	46315.8		ppb
	Be	9	30279.3	105.74481	ppb
	Sc	45	193978.4		ppb
	V-1	51	1063716.7	100.1548	ppb
	V	51	1977561	98.47524	ppb
	Cr	52	838350.3	102.02705	ppb
	Cr	53	141379.5	114.05765	ppb
	Mn	55	1275172	94.2864	ppb
	Co	59	1142677	103.00109	ppb
	Ni	60	250261.4	108.51199	ppb
	Cu	63	579174.8	105.23649	ppb
	Cu	65	269908.2	108.43374	ppb
	As	75	184861.9	102.42808	ppb
	Se	77	19262.4	113.26815	ppb
	Se	82	17938.8	96.33847	ppb
>	Rh	103	570587.2		ppb
	Cd	111	268570.2	95.59551	ppb
	Cd	114	624875.7	92.79664	ppb
	Sb	121	943795.9	91.34821	ppb
	Sb	123	720839.7	89.88683	ppb
>	Ho	165	1283185.8		ppb
	Tl	205	4855910.9	115.75865	ppb
	Pb	208	6284335.7	114.48766	ppb
	Kr	83	-16350.1		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Saturday, July 30, 2011 13:56:23

Sample Description:

Concentration Results

	Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
>	Li	6	82955.5		ppb
	Be	9	32.3	-0.04319	ppb
	Sc	45	330169.9		ppb
	V-1	51	115796.7	-2.43839	ppb
	V	51	124579	-0.66529	ppb
	Cr	52	24353.7	0.63861	ppb
	Cr	53	36891	-10.93903	ppb
	Mn	55	35715.5	0.40111	ppb
	Co	59	1735.2	-0.00467	ppb
	Ni	60	2614.8	0.38689	ppb
	Cu	63	5400	0.06375	ppb
	Cu	65	2701.4	0.12813	ppb
	As	75	-35.5	0.24145	ppb
	Se	77	6231.8	-0.91494	ppb
	Se	82	93.1	0.17338	ppb
>	Rh	103	876965.4		ppb
	Cd	111	310.9	-0.03441	ppb
	Cd	114	711	-0.03452	ppb
	Sb	121	1292.4	-0.02159	ppb
	Sb	123	1005.9	-0.02179	ppb
>	Ho	165	1646107.2		ppb
	Tl	205	3582.5	-0.02208	ppb
	Pb	208	20933.1	0.06573	ppb
	Kr	83	85.8		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Saturday, July 30, 2011 13:58:48

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	71328.8		ppb
- Be	9	42534.6	96.42813	ppb
- Sc	45	279797.1		ppb
- V-1	51	1457552.2	101.38974	ppb
- V	51	2777378.6	102.23696	ppb
- Cr	52	1199238.7	107.78309	ppb
- Cr	53	178824.9	104.04302	ppb
- Mn	55	1887692.6	103.13922	ppb
- Co	59	1555057.9	103.46358	ppb
- Ni	60	336807.5	107.79006	ppb
- As	75	254247.2	103.9745	ppb
- Se	77	25019.7	107.27004	ppb
- Se	82	26015.9	103.12241	ppb
> Rh	103	773076.9		ppb
- Cd	111	381361.6	100.18489	ppb
- Cd	114	886111.6	97.11462	ppb
- Sb	121	1306288.4	106.27167	ppb
- Sb	123	1002977.9	105.14526	ppb
> Ho	165	1526682.6		ppb
- Tl	205	5341853.2	107.01225	ppb
- Pb	208	6954084.5	106.44892	ppb
- Kr	83	-23691.9		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-10 FH

Sample Date: Saturday, July 30, 2011 14:13:19

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	117429.6		ppb
- Be	9	1454.8	1.90133	ppb
- Sc	45	507932.1		ppb
- Cr	52	1571927.4	111.43348	ppb
- Cr	53	182973.6	76.85543	ppb
- Mn	55	2511918	108.24491	ppb
- Co	59	177649.6	9.21976	ppb
- Ni	60	471146.2	118.87166	ppb
- As	75	284508.5	91.73745	ppb
- Se	77	205207.1	865.08689	ppb
- Se	82	268414.5	839.80796	ppb
> Rh	103	980755.4		ppb
- Cd	111	43816.4	8.97687	ppb
- Cd	114	92427.3	7.8909	ppb
- Sb	121	594321.5	38.09555	ppb
- Sb	123	454106.4	37.50561	ppb
> Ho	165	1933892		ppb
- Pb	208	2485035	29.86364	ppb
- Kr	83	-16368		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 FH

Sample Date: Saturday, July 30, 2011 14:15:44

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	114011.4		ppb
Be	9	1415.4	1.90572	ppb
Sc	45	471237.9		ppb
Cr	52	1274530.3	92.10504	ppb
Cr	53	154965.4	61.6239	ppb
Mn	55	2399523	105.65367	ppb
Co	59	137008.8	7.24478	ppb
Ni	60	469462.5	121.07837	ppb
As	75	225629.1	74.4077	ppb
Se	77	111795.6	467.80657	ppb
Se	82	146154.5	467.32945	ppb
Rh	103	959490.6		ppb
Cd	111	37955.6	7.93599	ppb
Cd	114	78780.7	6.86123	ppb
Sb	121	271232.1	17.9621	ppb
Sb	123	207451.7	17.70067	ppb
Ho	165	1865265.7		ppb
Pb	208	2318842.1	28.88341	ppb
Kr	83	-15415.4		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 FH

Sample Date: Saturday, July 30, 2011 14:18:09

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	101470.7		ppb
Be	9	1377.4	2.09224	ppb
Sc	45	425626.7		ppb
Cr	52	1252048.6	100.0443	ppb
Cr	53	151502.3	69.45808	ppb
Mn	55	2354830.2	114.6225	ppb
Co	59	135663.9	7.93301	ppb
Ni	60	463788.6	132.13572	ppb
Se	77	109816	510.14152	ppb
Se	82	142982.7	504.92857	ppb
Rh	103	868794		ppb
Cd	111	37574.6	8.68674	ppb
Cd	114	77883.8	7.50039	ppb
Sb	121	277522.3	20.17629	ppb
Sb	123	212113.2	19.86988	ppb
Ho	165	1700291.3		ppb
Pb	208	2294104.3	31.36922	ppb
Kr	83	-15218.1		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12 FH

Sample Date: Saturday, July 30, 2011 14:20:34

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	110741.8			ppb
- Be	9	1426.4	1.98059		ppb
- Sc	45	550309.4			ppb
- Cr	52	1258941	92.92439		ppb
- Cr	53	153163.5	62.54438		ppb
- Mn	55	2319643	104.2899		ppb
- Co	59	161443.3	8.74034		ppb
- Ni	60	324598.7	85.39971		ppb
- As	75	225880.9	76.07169		ppb
- Se	77	113890.4	487.92514		ppb
- Se	82	149093.1	486.84558		ppb
> Rh	103	939535.5			ppb
- Cd	111	33911.5	7.23225		ppb
- Cd	114	69741.5	6.19324		ppb
- Sb	121	430928.4	28.98474		ppb
- Sb	123	329640.4	28.56967		ppb
> Ho	165	1841077.4			ppb
- Pb	208	2421603.6	30.57416		ppb
- Kr	83	-16008.6			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12 FH

Sample Date: Saturday, July 30, 2011 14:22:59

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	115523.1			ppb
- Be	9	26461.1	36.98554		ppb
- Sc	45	566196.8			ppb
- Cr	52	2204942.6	156.47162		ppb
- Cr	53	252679.1	119.72113		ppb
- Mn	55	3708976.4	160.1309		ppb
- Co	59	1187353.6	62.09308		ppb
- Ni	60	530088	133.51978		ppb
- As	75	356634.6	114.69417		ppb
- Se	77	122166.7	501.22635		ppb
- Se	82	160728.2	501.78334		ppb
> Rh	103	982715.5			ppb
- Cd	111	228875.7	47.24314		ppb
- Cd	114	521608.1	44.91612		ppb
- Sb	121	1123802.7	71.93271		ppb
- Sb	123	859602.7	70.89945		ppb
> Ho	165	1939335.7			ppb
- Pb	208	6522751.6	78.53702		ppb
- Kr	83	-15980.3			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Saturday, July 30, 2011 14:25:27

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	96429.8			ppb
Be	9	28.7	-0.05721		ppb
Sc	45	340368.2			ppb
V-1	51	111814.4	-2.95314		ppb
V	51	107437.4	-1.35923		ppb
Cr	52	17984.4	0.09045		ppb
Cr	53	39285.1	-10.20214		ppb
Mn	55	31470.7	0.14822		ppb
Co	59	1017.4	-0.04793		ppb
Ni	60	1171.7	-0.0258		ppb
Cu	63	4627.8	-0.04451		ppb
Cu	65	2583	0.07613		ppb
As	75	-586.8	0.05386		ppb
Se	77	6876.9	1.09385		ppb
Se	82	91.5	0.15803		ppb
Rh	103	907552			ppb
Cd	111	256	-0.04876		ppb
Cd	114	382.2	-0.06731		ppb
Sb	121	878	-0.05168		ppb
Sb	123	632	-0.05708		ppb
Ho	165	1629915.9			ppb
Tl	205	2415	-0.04304		ppb
Pb	208	13244.8	-0.04046		ppb
Kr	83	110.5			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Saturday, July 30, 2011 14:27:52

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	85762.3			ppb
Be	9	50450	95.13814		ppb
Sc	45	314212.1			ppb
V-1	51	1664372.1	108.60662		ppb
V	51	3183350	109.59037		ppb
Cr	52	1374268.2	115.26243		ppb
Cr	53	202007.4	111.53932		ppb
Mn	55	2318947.3	118.33525		ppb
Co	59	1778940.1	110.35566		ppb
Ni	60	379340.4	113.20364		ppb
Cu	63	853030.1	106.66888		ppb
Cu	65	399480.3	110.45069		ppb
As	75	279359.6	106.50085		ppb
Se	77	28008.8	113.35738		ppb
Se	82	29128.1	107.65813		ppb
Rh	103	829184.8			ppb
Cd	111	418274.6	102.4659		ppb
Cd	114	966116	98.73859		ppb
Sb	121	1397103	112.05374		ppb
Sb	123	1068002.4	110.37854		ppb
Ho	165	1548691.2			ppb
Tl	205	5352040.5	105.68469		ppb
Pb	208	6976242.5	105.26502		ppb
Kr	83	-26584.9			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-13 FH

Sample Date: Saturday, July 30, 2011 14:30:19

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	95533.8			ppb
Be	9	16.3	-0.07734		ppb
Sc	45	342069.5			ppb
Cr	52	66268.1	3.80642		ppb
Cr	53	11955.9	-28.5285		ppb
Mn	55	145596.5	5.4932		ppb
Co	59	1322.8	-0.03093		ppb
Ni	60	5741.8	1.21613		ppb
As	75	464.8	0.4178		ppb
Se	77	464.7	-29.17778		ppb
Se	82	32.7	-0.0406		ppb
Rh	103	912087.7			ppb
Cd	111	1046.6	0.12711		ppb
Cd	114	-549.1	-0.15386		ppb
Sb	121	167017.2	11.26628		ppb
Sb	123	127915.4	11.11693		ppb
Ho	165	1823878.9			ppb
Pb	208	115091	1.24719		ppb
Kr	83	-304.3			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-13 Teflon

Sample Date: Saturday, July 30, 2011 14:32:44

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	50880.3			ppb
Be	9	369.3	1.06983		ppb
Sc	45	1064079.2			ppb
Cr	52	2183569	311.68332		ppb
Cr	53	254930.9	279.22523		ppb
Mn	55	1023619.4	87.92581		ppb
Co	59	156573.2	16.32351		ppb
Ni	60	55482.5	27.71953		ppb
As	75	16646.9	10.95599		ppb
Se	77	1721.5	-16.33412		ppb
Se	82	19.6	-0.02932		ppb
Rh	103	490589.4			ppb
Cd	111	40037.2	16.48731		ppb
Cd	114	7587.3	1.20876		ppb
Sb	121	39812	5.96397		ppb
Sb	123	30659.3	5.91727		ppb
Ho	165	813733			ppb
Pb	208	1287002	36.8091		ppb
Kr	83	-441292.6			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-13 Quartz

Sample Date: Saturday, July 30, 2011 14:35:08

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	91009.1			ppb
Be	9	81	0.03842		ppb
Sc	45	364213.5			ppb
Cr	52	520266.6	44.259		ppb
Cr	53	65593.7	13.11823		ppb
Mn	55	692935.8	35.58384		ppb
Co	59	12691.9	0.70813		ppb
Ni	60	52491.5	15.87848		ppb
As	75	4193.1	1.90412		ppb
Se	77	516.7	-28.61926		ppb
Se	82	35	-0.0165		ppb
Rh	103	802951.6			ppb
Cd	111	10710.2	2.60542		ppb
Cd	114	3044.1	0.21863		ppb
Sb	121	12329.4	0.79852		ppb
Sb	123	9576.1	0.79861		ppb
Ho	165	1671637.3			ppb
Pb	208	654662.4	8.94199		ppb
Kr	83	-7175.2			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: LRB BH

Sample Date: Saturday, July 30, 2011 14:37:33

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	76387.5			ppb
Be	9	4.7	-0.09561		ppb
Sc	45	190270.3			ppb
Cr	52	60642.4	4.28021		ppb
Cr	53	11280.1	-27.54479		ppb
Mn	55	245783.7	12.42372		ppb
Co	59	18807.9	1.16069		ppb
Ni	60	31097.6	9.74477		ppb
As	75	108.1	0.3029		ppb
Se	77	406.7	-29.09486		ppb
Se	82	28.8	-0.03361		ppb
Rh	103	763148.2			ppb
Cd	111	179.5	-0.05839		ppb
Cd	114	407.2	-0.05762		ppb
Sb	121	545.4	-0.05297		ppb
Sb	123	339.4	-0.06925		ppb
Ho	165	1105943			ppb
Pb	208	65378.3	1.15921		ppb
Kr	83	30.3			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: LRB BH

Sample Date: Saturday, July 30, 2011 14:39:59

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	90665.5			ppb
Be	9	17877.2	31.81702		ppb
Sc	45	367984.3			ppb
Cr	52	788229.8	61.64961		ppb
Cr	53	96234.4	29.90848		ppb
Mn	55	1187135.2	56.34904		ppb
Co	59	795581.6	46.41038		ppb
Ni	60	185276.1	51.87913		ppb
As	75	93543.9	33.7614		ppb
Se	77	6364.6	-0.39724		ppb
Se	82	7933.5	27.50509		ppb
Rh	103	880456			ppb
Cd	111	150535.7	34.65582		ppb
Cd	114	350143.7	33.62877		ppb
Sb	121	1118677.3	78.51503		ppb
Sb	123	861119.5	77.87896		ppb
Ho	165	1768936.8			ppb
Pb	208	4173305.9	55.01691		ppb
Kr	83	61			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-1 BH

Sample Date: Saturday, July 30, 2011 14:42:23

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	45274.6			ppb
Be	9	16.7	-0.04541		ppb
Sc	45	172101.3			ppb
Cr	52	191896.4	33.74081		ppb
Cr	53	27745	7.26224		ppb
Mn	55	368189.8	39.56971		ppb
Co	59	10614.9	1.31364		ppb
Ni	60	27869.7	17.61643		ppb
As	75	41607.1	34.3296		ppb
Se	77	80796.5	867.4094		ppb
Se	82	105663.6	841.8521		ppb
Rh	103	385114.4			ppb
Cd	111	31510.3	16.52583		ppb
Cd	114	71266.4	15.59138		ppb
Sb	121	59255.2	9.89389		ppb
Sb	123	45753.5	9.84492		ppb
Ho	165	736057.3			ppb
Pb	208	242283.7	7.47856		ppb
Kr	83	638.7			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-2 BH

Sample Date: Saturday, July 30, 2011 14:44:48

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	40747.5		ppb
Be	9	20	-0.02687	ppb
Sc	45	141076.4		ppb
Cr	52	131979.7	26.62136	ppb
Cr	53	21543.2	2.88374	ppb
Mn	55	365030.3	45.65513	ppb
Co	59	20254.9	3.03174	ppb
Ni	60	24045.8	17.60809	ppb
As	75	66357	63.21473	ppb
Se	77	123921.7	1566.2	ppb
Se	82	162507.6	1500.7037	ppb
Rh	103	332314.4		ppb
Cd	111	3400.4	1.9749	ppb
Cd	114	7394	1.78468	ppb
Sb	121	16528.3	3.32881	ppb
Sb	123	12586.3	3.26378	ppb
Ho	165	596120.4		ppb
Pb	208	200659.8	7.65215	ppb
Kr	83	1468.9		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-2 BH

Sample Date: Saturday, July 30, 2011 14:47:12

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	42395		ppb
Be	9	18.3	-0.03535	ppb
Sc	45	135044.1		ppb
Cr	52	139150.1	28.20687	ppb
Cr	53	21351.4	2.60046	ppb
Mn	55	358624	44.90358	ppb
Co	59	20441.6	3.06538	ppb
Ni	60	24231.3	17.77456	ppb
As	75	69204.9	66.0206	ppb
Se	77	121931.6	1543.0584	ppb
Se	82	159361	1473.9113	ppb
Rh	103	331814.8		ppb
Cd	111	3008.6	1.73834	ppb
Cd	114	7029.4	1.69459	ppb
Sb	121	15696.2	3.34165	ppb
Sb	123	12113.2	3.32127	ppb
Ho	165	564098.3		ppb
Pb	208	178631.2	7.18533	ppb
Kr	83	1659.9		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 BH

Sample Date: Saturday, July 30, 2011 14:49:37

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intense	Conc.	Meas Report	Unit
> Li	6	39157.3			ppb
- Be	9	20	-0.02271		ppb
- Sc	45	114314.3			ppb
- Cr	52	433782.1	105.47104		ppb
- Cr	53	57229.6	85.21782		ppb
- Mn	55	522406.6	76.8996		ppb
- Co	59	12565.3	2.15837		ppb
- Ni	60	42549.7	36.61355		ppb
- As	75	177601.6	196.28163		ppb
- Se	77	128708.1	1898.6127		ppb
- Se	82	172462	1852.3547		ppb
> Rh	103	285707.8			ppb
- Cd	111	5033.1	3.47604		ppb
- Cd	114	11730.7	3.37986		ppb
- Sb	121	18464.7	5.44093		ppb
- Sb	123	13915.7	5.28056		ppb
> Ho	165	413021.8			ppb
- Pb	208	421363.9	23.65873		ppb
- Kr	83	1164.8			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 BH

Sample Date: Saturday, July 30, 2011 14:52:02

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intense	Conc.	Meas Report	Unit
> Li	6	39288			ppb
- Be	9	9084.9	37.34248		ppb
- Sc	45	111968.1			ppb
- Cr	52	658566.5	162.37957		ppb
- Cr	53	84057.5	144.02626		ppb
- Mn	55	832463.1	124.5481		ppb
- Co	59	307446.6	55.83877		ppb
- Ni	60	110230.7	96.34914		ppb
- As	75	283105	315.79602		ppb
- Se	77	134303.2	2002.344		ppb
- Se	82	181098.3	1964.3252		ppb
> Rh	103	282923.9			ppb
- Cd	111	35299.9	25.26651		ppb
- Cd	114	80782.5	24.11881		ppb
- Sb	121	189334.8	59.15106		ppb
- Sb	123	143091.1	57.60292		ppb
> Ho	165	397194.3			ppb
- Pb	208	1184056.7	69.58652		ppb
- Kr	83	1118			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Saturday, July 30, 2011 14:54:29

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report Unit
Li	6	43024.9		ppb
Be	9	25	-0.01092	ppb
Sc	45	157819.1		ppb
V-1	51	50322	-3.76852	ppb
V	51	47877.1	-1.78479	ppb
Cr	52	8905.4	0.05882	ppb
Cr	53	17515.9	-13.35889	ppb
Mn	55	14366.7	0.00155	ppb
Co	59	869	-0.00846	ppb
Ni	60	861	0.11838	ppb
Cu	63	2690.1	0.03376	ppb
Cu	65	3693.1	1.27041	ppb
As	75	905.8	0.87706	ppb
Se	77	4358.7	9.2441	ppb
Se	82	-34.8	-0.38452	ppb
Rh	103	459750.9		ppb
Cd	111	172.9	-0.02973	ppb
Cd	114	324.7	-0.04307	ppb
Sb	121	497.7	-0.0463	ppb
Sb	123	356.2	-0.05249	ppb
Ho	165	851766.7		ppb
Tl	205	1824.5	-0.02303	ppb
Pb	208	8948.7	0.01492	ppb
Kr	83	230.8		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Saturday, July 30, 2011 14:56:54

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report Unit
Li	6	42197.6		ppb
Be	9	26116.1	100.15232	ppb
Sc	45	158613.9		ppb
V-1	51	862052.3	104.69236	ppb
V	51	1647933.7	105.76503	ppb
Cr	52	706450.4	110.55223	ppb
Cr	53	103139.1	104.59665	ppb
Mn	55	1015398.5	96.47681	ppb
Co	59	944368.6	109.34686	ppb
Ni	60	208343.5	116.06334	ppb
Cu	63	493093.8	115.15096	ppb
Cu	65	233787.6	120.72168	ppb
As	75	148091.3	105.40819	ppb
Se	77	14841.8	111.78495	ppb
Se	82	13707.1	94.56461	ppb
Rh	103	444163.7		ppb
Cd	111	196158.8	89.67473	ppb
Cd	114	450523.8	85.92746	ppb
Sb	121	666080.1	97.94582	ppb
Sb	123	512086.4	97.03498	ppb
Ho	165	844683.7		ppb
Tl	205	3435222.6	124.392	ppb
Pb	208	4321016.8	119.58447	ppb
Kr	83	-12535.8		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-4 BH

Sample Date: Saturday, July 30, 2011 14:59:21

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	37869			ppb
Be	9	15.3	-0.03935		ppb
Sc	45	106323			ppb
Cr	52	104609.6	26.58763		ppb
Cr	53	18432.3	5.9902		ppb
Mn	55	339190.6	53.67762		ppb
Co	59	14608.8	2.74359		ppb
Ni	60	24402.1	22.6043		ppb
As	75	109692	131.31235		ppb
Se	77	139258.4	2230.6474		ppb
Se	82	189070.8	2199.7032		ppb
Rh	103	263786.7			ppb
Cd	111	3968.9	2.95405		ppb
Cd	114	6043.9	1.84121		ppb
Sb	121	25051.1	8.50239		ppb
Sb	123	18901.8	8.26341		ppb
Ho	165	361304.7			ppb
Pb	208	125444	7.90023		ppb
Kr	83	1886.6			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-5 BH

Sample Date: Saturday, July 30, 2011 15:01:46

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	38737.5			ppb
Be	9	8.3	-0.07048		ppb
Sc	45	108897.3			ppb
Cr	52	112276.5	28.21412		ppb
Cr	53	18805.8	6.21258		ppb
Mn	55	322429.1	50.23266		ppb
Co	59	9966.1	1.81174		ppb
Ni	60	22443.7	20.47366		ppb
As	75	118566.4	139.99411		ppb
Se	77	166256.2	2631.2346		ppb
Se	82	224574	2576.304		ppb
Rh	103	267499.6			ppb
Cd	111	1759.8	1.23306		ppb
Cd	114	976.6	0.20667		ppb
Sb	121	36780.6	12.23232		ppb
Sb	123	27986.1	11.99059		ppb
Ho	165	370343.6			ppb
Pb	208	110123.8	6.73423		ppb
Kr	83	1826.9			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-5 BH

Sample Date: Saturday, July 30, 2011 15:04:10

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	34388.4			ppb
Be	9	11	-0.05389		ppb
Sc	45	97801.7			ppb
Cr	52	111629.4	32.39116		ppb
Cr	53	17555.3	9.28511		ppb
Mn	55	323144.4	58.00423		ppb
Co	59	9969.5	2.09652		ppb
Ni	60	22082.8	23.17069		ppb
As	75	120697.4	163.56928		ppb
Se	77	166754.3	3035.3014		ppb
Se	82	225830.8	2974.9137		ppb
Rh	103	232993.4			ppb
Cd	111	1502.9	1.20696		ppb
Cd	114	973.7	0.25137		ppb
Sb	121	36914.8	14.33635		ppb
Sb	123	28148	14.08404		ppb
Ho	165	317562.2			ppb
Pb	208	107557.2	7.70155		ppb
Kr	83	1697.3			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6 BH

Sample Date: Saturday, July 30, 2011 15:06:35

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	41225.2			ppb
Be	9	19	-0.03042		ppb
Sc	45	115426.8			ppb
Cr	52	118818.5	28.46256		ppb
Cr	53	20043.7	6.89178		ppb
Mn	55	313557.7	46.45104		ppb
Co	59	9204.3	1.5814		ppb
Ni	60	53717.7	47.14006		ppb
As	75	90733.5	102.11156		ppb
Se	77	101465.3	1517.2457		ppb
Se	82	136416.7	1491.3408		ppb
Rh	103	280694.5			ppb
Cd	111	723.1	0.41881		ppb
Cd	114	1554.3	0.36694		ppb
Sb	121	17683.9	5.46026		ppb
Sb	123	13510.5	5.37388		ppb
Ho	165	394140.1			ppb
Pb	208	86586.9	4.9145		ppb
Kr	83	3225.8			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6 BH

Sample Date: Saturday, July 30, 2011 15:09:00

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	41523.4			ppb
- Be	9	8389.2	32.61213		ppb
- Sc	45	115547.5			ppb
- Cr	52	361321.7	89.63225		ppb
- Cr	53	48653.6	69.3003		ppb
- Mn	55	638875.5	96.49226		ppb
- Co	59	302532.6	55.6386		ppb
- Ni	60	120850.6	107.00452		ppb
- As	75	186748.7	211.01988		ppb
- Se	77	108077.5	1625.9354		ppb
- Se	82	144617.5	1588.5135		ppb
> Rh	103	279373.7			ppb
- Cd	111	27633.9	20.00785		ppb
- Cd	114	63181.1	19.08157		ppb
- Sb	121	174021.7	54.76974		ppb
- Sb	123	132224.2	53.62353		ppb
> Ho	165	394229.8			ppb
- Pb	208	822626.9	48.6417		ppb
- Kr	83	3122.6			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-7 BH

Sample Date: Saturday, July 30, 2011 15:11:24

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	40975			ppb
- Be	9	1235.4	4.77481		ppb
- Sc	45	166799			ppb
- Cr	52	8590432.6	2225.2276		ppb
- Cr	53	998448.3	2199.6587		ppb
- Mn	55	1213079.3	189.9494		ppb
- Co	59	127419.9	24.07504		ppb
- Ni	60	509966.8	466.22389		ppb
- As	75	300215.2	349.27173		ppb
- Se	77	115880.9	1798.8178		ppb
- Se	82	156152.4	1766.4203		ppb
> Rh	103	271309.2			ppb
- Cd	111	11640.2	8.61827		ppb
- Cd	114	23034.4	7.09985		ppb
- Sb	121	116239.8	33.90345		ppb
- Sb	123	88776.5	33.36357		ppb
> Ho	165	425005			ppb
- Pb	208	1668185.3	91.7013		ppb
- Kr	83	-5575			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-8 BH

Sample Date: Saturday, July 30, 2011 15:13:49

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	40895.2			ppb
- Be	9	18.3	-0.03201		ppb
- Sc	45	119267.2			ppb
- Cr	52	3007756.3	730.33827		ppb
- Cr	53	350452.2	700.0405		ppb
- Mn	55	318957.5	45.86697		ppb
- Co	59	22878.1	3.96855		ppb
- Ni	60	206107.1	176.59081		ppb
- As	75	114387.1	125.04504		ppb
- Se	77	163330.4	2389.4386		ppb
> Se	82	216248	2295.8686		ppb
> Rh	103	289063.2			ppb
- Cd	111	1549	0.98352		ppb
- Cd	114	2252.6	0.55801		ppb
- Sb	121	21587.6	6.12798		ppb
- Sb	123	16481.3	6.02615		ppb
> Ho	165	429701.7			ppb
- Pb	208	244739.3	13.10805		ppb
- Kr	83	1208.3			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-8 BH

Sample Date: Saturday, July 30, 2011 15:16:14

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	40924.8			ppb
- Be	9	20	-0.0267		ppb
- Sc	45	119208.1			ppb
- Cr	52	3025977.1	731.14715		ppb
- Cr	53	353132.7	702.03458		ppb
- Mn	55	322116.9	46.09568		ppb
- Co	59	23307.5	4.02441		ppb
- Ni	60	206037.2	175.64932		ppb
- As	75	113534.1	123.5193		ppb
- Se	77	163932.7	2386.2234		ppb
- Se	82	217190.7	2294.3137		ppb
> Rh	103	290518.1			ppb
- Cd	111	1586.3	1.00357		ppb
- Cd	114	2254.7	0.55565		ppb
- Sb	121	21741.6	6.16587		ppb
- Sb	123	16511.6	6.03089		ppb
> Ho	165	430160.6			ppb
- Pb	208	240243	12.8505		ppb
- Kr	83	1231.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9 BH

Sample Date: Saturday, July 30, 2011 15:18:39

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
> Li	6	41739.3			ppb
- Be	9	33.7	0.02507		ppb
- Sc	45	120008.7			ppb
- Cr	52	1066720.7	247.6908		ppb
- Cr	53	129792.4	225.27295		ppb
- Mn	55	347325.1	47.98864		ppb
- Co	59	16219.5	2.66577		ppb
- Ni	60	145851.9	119.80425		ppb
- As	75	101987.4	106.98753		ppb
- Se	77	159360.8	2234.9325		ppb
- Se	82	212458.3	2164.215		ppb
> Rh	103	301286.6			ppb
- Cd	111	4678.5	3.05195		ppb
- Cd	114	10203	2.76973		ppb
- Sb	121	20977.2	5.82048		ppb
- Sb	123	16016.8	5.72491		ppb
> Ho	165	439132.4			ppb
- Pb	208	172233.7	8.9553		ppb
- Kr	83	483.6			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9 BH

Sample Date: Saturday, July 30, 2011 15:21:04

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
> Li	6	41900.6			ppb
- Be	9	9002.1	34.68167		ppb
- Sc	45	121773.7			ppb
- Cr	52	1325303.3	304.72124		ppb
- Cr	53	159985.6	282.71335		ppb
- Mn	55	696580.9	96.52032		ppb
- Co	59	328388.7	55.4052		ppb
- Ni	60	215831.6	175.54251		ppb
- As	75	208290.5	215.93077		ppb
- Se	77	166951.6	2317.2915		ppb
- Se	82	222845.7	2245.6655		ppb
> Rh	103	304538.9			ppb
- Cd	111	36821.5	24.47959		ppb
- Cd	114	83968.2	23.28837		ppb
- Sb	121	198343.2	55.34317		ppb
- Sb	123	150820.4	54.22111		ppb
> Ho	165	444755.9			ppb
- Pb	208	1047458.8	54.93804		ppb
- Kr	83	399.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Saturday, July 30, 2011 15:23:32

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	42283.7			ppb
Be	9	16.7	-0.04175		ppb
Sc	45	160385.4			ppb
V-1	51	39282.5	-5.28341		ppb
V	51	37766.4	-2.48523		ppb
Cr	52	9369.5	0.104		ppb
Cr	53	14092.3	-18.22756		ppb
Mn	55	13980.7	-0.05811		ppb
Co	59	807.4	-0.01691		ppb
Ni	60	878	0.11907		ppb
Cu	63	2860.1	0.06047		ppb
Cu	65	5075.8	1.91722		ppb
As	75	237	0.41711		ppb
Se	77	3869.5	4.02572		ppb
Se	82	-1.7	-0.16148		ppb
Rh	103	468368.4			ppb
Cd	111	166.7	-0.03372		ppb
Cd	114	306.3	-0.04745		ppb
Sb	121	469	-0.04562		ppb
Sb	123	348.6	-0.04933		ppb
Hg	165	799372.5			ppb
Tl	205	1637.8	-0.02565		ppb
Pb	208	7788	-0.00251		ppb
Kr	83	253.9			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Saturday, July 30, 2011 15:25:57

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	39522.2			ppb
Be	9	24455.9	100.07811		ppb
Sc	45	150391.1			ppb
V-1	51	802913.7	102.29077		ppb
V	51	1546711.6	104.28217		ppb
Cr	52	676086.3	111.2328		ppb
Cr	53	94788.3	99.85129		ppb
Mn	55	965761.9	96.48065		ppb
Co	59	919723.4	111.98329		ppb
Ni	60	205570.3	120.46338		ppb
Cu	63	483703.3	118.81361		ppb
Cu	65	230780.4	125.3221		ppb
As	75	143562.7	107.47294		ppb
Se	77	13890.3	109.5747		ppb
Se	82	13303.1	96.53746		ppb
Rh	103	422407.2			ppb
Cd	111	185657.9	89.26045		ppb
Cd	114	430429.4	86.32111		ppb
Sb	121	626689	104.77872		ppb
Sb	123	477552.3	102.87995		ppb
Hg	165	743121.8			ppb
Tl	205	2970464.6	122.27737		ppb
Pb	208	3702067.3	116.4536		ppb
Kr	83	-12131.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-10 BH

Sample Date: Saturday, July 30, 2011 15:28:24

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
Li	6	69616.6		ppb
Be	9	21.7	-0.05487	ppb
Sc	45	247557.3		ppb
Cr	52	148780.8	14.04891	ppb
Cr	53	19045	-19.5135	ppb
Mn	55	563763.6	34.05414	ppb
Co	59	18412.7	1.28586	ppb
Ni	60	32226.1	11.39744	ppb
As	75	37474.9	17.62858	ppb
Se	77	91092.3	541.62874	ppb
Se	82	117509.2	529.46506	ppb
Rh	103	681146.8		ppb
Cd	111	3264.3	0.86932	ppb
Cd	114	6916.8	0.75903	ppb
Sb	121	18128.1	1.44807	ppb
Sb	123	14026.1	1.44343	ppb
Ho	165	1438852.2		ppb
Pb	208	511959.4	8.10733	ppb
Kr	83	-222.4		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 BH

Sample Date: Saturday, July 30, 2011 15:30:49

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
Li	6	75884.4		ppb
Be	9	18	-0.06691	ppb
Sc	45	272955.6		ppb
Cr	52	423513.9	39.56876	ppb
Cr	53	50819.4	5.87032	ppb
Mn	55	771488.2	43.9619	ppb
Co	59	23653.4	1.56578	ppb
Ni	60	72091.1	24.21636	ppb
As	75	42793.3	18.7899	ppb
Se	77	99397.7	553.12774	ppb
Se	82	128815.3	542.53255	ppb
Rh	103	728573.7		ppb
Cd	111	26178.8	7.19991	ppb
Cd	114	60282.7	6.91524	ppb
Sb	121	29366.7	2.31914	ppb
Sb	123	22649.1	2.30357	ppb
Ho	165	1497670.1		ppb
Pb	208	1046474.5	16.13307	ppb
Kr	83	-258.2		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 BH

Sample Date: Saturday, July 30, 2011 15:33:13

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	75187.5			ppb
Be	9	20.3	-0.06184		ppb
Sc	45	273029.2			ppb
Cr	52	434666.9	41.16226		ppb
Cr	53	51840.8	7.26218		ppb
Mn	55	775498.4	44.7584		ppb
Co	59	23709.6	1.59039		ppb
Ni	60	73109.6	24.86818		ppb
As	75	41512.6	18.4601		ppb
Se	77	101503.4	572.94387		ppb
Se	82	131468.2	560.61583		ppb
Rh	103	719604.3			ppb
Cd	111	26501.7	7.38183		ppb
Cd	114	60910.4	7.0772		ppb
Sb	121	29738.9	2.38164		ppb
Sb	123	22749.5	2.3452		ppb
Ho	165	1478797.2			ppb
Pb	208	1052246.4	16.43429		ppb
Kr	83	-276.2			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12 BH

Sample Date: Saturday, July 30, 2011 15:35:38

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	79253.5			ppb
Be	9	17	-0.07062		ppb
Sc	45	287729.3			ppb
Cr	52	265264.5	23.39135		ppb
Cr	53	31932.3	-10.82145		ppb
Mn	55	841721	46.3378		ppb
Co	59	11427.8	0.67322		ppb
Ni	60	81796.4	26.52986		ppb
As	75	29531.2	12.58657		ppb
Se	77	76526.8	402.69191		ppb
Se	82	97995.4	398.00824		ppb
Rh	103	755313.7			ppb
Cd	111	1586.2	0.32095		ppb
Cd	114	3086.2	0.24376		ppb
Sb	121	8321.8	0.54889		ppb
Sb	123	6368.3	0.53892		ppb
Ho	165	1550440.5			ppb
Pb	208	295837.5	4.23884		ppb
Kr	83	-1279.8			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12 BH

Sample Date: Saturday, July 30, 2011 15:38:02

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	78667.2			ppb
Be	9	15865.8	32.56107		ppb
Sc	45	282103.4			ppb
Cr	52	884553.9	83.11886		ppb
Cr	53	105802.8	50.74404		ppb
Mn	55	1726908.4	98.93449		ppb
Co	59	762951.4	53.19723		ppb
Ni	60	237523.3	79.65465		ppb
As	75	122406.3	52.6466		ppb
Se	77	83111	451.84704		ppb
Se	82	107101.8	445.93254		ppb
Rh	103	736788.6			ppb
Cd	111	113595.9	31.23881		ppb
Cd	114	261903.6	30.04694		ppb
Sb	121	418477.6	34.36708		ppb
Sb	123	322054.6	34.0788		ppb
Ho	165	1508955.2			ppb
Pb	208	3559327.7	55.02266		ppb
Kr	83	-1310.6			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-13 BH

Sample Date: Saturday, July 30, 2011 15:40:27

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	88269			ppb
Be	9	26	-0.05789		ppb
Sc	45	329146.8			ppb
Cr	52	338189.5	26.81662		ppb
Cr	53	40444.1	-7.4469		ppb
Mn	55	605462.8	29.28988		ppb
Co	59	8003.5	0.38187		ppb
Ni	60	64759	18.65899		ppb
As	75	581.8	0.47422		ppb
Se	77	547.7	-28.58682		ppb
Se	82	71.4	0.10863		ppb
Rh	103	845699.1			ppb
Cd	111	705.9	0.06366		ppb
Cd	114	-4558.4	-0.55943		ppb
Sb	121	12341.7	0.76037		ppb
Sb	123	9363.6	0.74026		ppb
Ho	165	1745970			ppb
Pb	208	230083.2	2.85598		ppb
Kr	83	-468.1			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Saturday, July 30, 2011 15:42:55

Sample Description:

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	49490.4			ppb
-	Be	9	15.3	-0.05518		ppb
-	Sc	45	189426			ppb
-	V-1	51	56513.4	-3.73081		ppb
-	V	51	53491.3	-1.78182		ppb
-	Cr	52	10629.2	0.15316		ppb
-	Cr	53	20001.4	-12.83892		ppb
-	Mn	55	15681.2	-0.02773		ppb
-	Co	59	582.4	-0.04718		ppb
-	Ni	60	741.7	0.01258		ppb
-	Cu	63	2834.4	-0.00042		ppb
-	Cu	65	2721.1	0.64251		ppb
-	As	75	-1038.1	-0.38027		ppb
-	Se	77	5007.4	10.43271		ppb
-	Se	82	-2.5	-0.16508		ppb
>	Rh	103	513210.3			ppb
-	Cd	111	133.9	-0.05298		ppb
-	Cd	114	222.5	-0.06614		ppb
-	Sb	121	394	-0.07041		ppb
-	Sb	123	301.9	-0.07163		ppb
>	Ho	165	1015722.3			ppb
-	Tl	205	1535.1	-0.04211		ppb
-	Pb	208	8714.6	-0.02983		ppb
-	Kr	83	123.2			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Saturday, July 30, 2011 15:45:20

Sample Description:

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	46467.1			ppb
-	Be	9	30319.2	105.5304		ppb
-	Sc	45	176125.8			ppb
-	V-1	51	933041.9	104.31076		ppb
-	V	51	1788830.9	105.71632		ppb
-	Cr	52	770404.5	111.03825		ppb
-	Cr	53	110390.5	102.56267		ppb
-	Mn	55	1116971.2	97.75569		ppb
-	Co	59	1030553.4	109.89497		ppb
-	Ni	60	226937.6	116.4348		ppb
-	Cu	63	528358.9	113.63397		ppb
-	Cu	65	250464.4	119.11027		ppb
-	As	75	161337.3	105.78844		ppb
-	Se	77	16209.1	112.63473		ppb
-	Se	82	15252.3	96.93551		ppb
>	Rh	103	482291.4			ppb
-	Cd	111	215540.5	90.76215		ppb
-	Cd	114	494460.7	86.86852		ppb
-	Sb	121	729111.5	94.10849		ppb
-	Sb	123	563567.2	93.72813		ppb
>	Ho	165	962154.3			ppb
-	Tl	205	3783307.9	120.25775		ppb
-	Pb	208	4734820.4	115.01689		ppb
-	Kr	83	-13998.3			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: Blank

Sample Date: Monday, August 01, 2011 09:31:54

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	154652.1		ppb
	Be	9	6.3		ppb
	Sc	45	464514.2		ppb
	V-1	51	105569.7		ppb
	V	51	107842.2		ppb
	Cr	52	17694.6		ppb
	Cr	53	34730.6		ppb
	Mn	55	37406.1		ppb
	Co	59	239.3		ppb
	Ni	60	807		ppb
	Cu	63	3936.9		ppb
	Cu	65	2342		ppb
	As	75	-291.7		ppb
	Se	77	5147.1		ppb
	Se	82	41.4		ppb
>	Rh	103	940474.3		ppb
	Cd	111	28.5		ppb
	Cd	114	26.5		ppb
	Sb	121	125		ppb
	Sb	123	96.2		ppb
>	Hg	165	1689439		ppb
	Tl	205	122.3		ppb
	Pb	208	8893		ppb
	Kr	83	89.9		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: Standard 1

Sample Date: Monday, August 01, 2011 09:34:19

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	152370.9		ppb
	Be	9	1037.4	1.09546	ppb
	Sc	45	447267.4		ppb
	V-1	51	122631.9	1.26595	ppb
	V	51	146306.7	1.33465	ppb
	Cr	52	36290	1.4577	ppb
	Cr	53	35295.4	0.93282	ppb
	Mn	55	67145.4	1.42879	ppb
	Co	59	22917.9	1.2726	ppb
	Ni	60	5471.6	1.26653	ppb
	Cu	63	15537	1.32914	ppb
	Cu	65	8034.9	1.44378	ppb
	As	75	2851	1.07576	ppb
	Se	77	5229.8	0.96416	ppb
	Se	82	329.1	0.96514	ppb
>	Rh	103	917816.4		ppb
	Cd	111	4782.6	1.05349	ppb
	Cd	114	11339.8	1.04576	ppb
	Sb	121	15486.5	1.15968	ppb
	Sb	123	11757.2	1.13442	ppb
>	Hg	165	1647541.6		ppb
	Tl	205	64212.7	1.19081	ppb
	Pb	208	93657.8	1.20823	ppb
	Kr	83	-213.3		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: Standard 2

Sample Date: Monday, August 01, 2011 09:36:44

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	157607.4		ppb
Be	9	98668.2	101.4349	ppb
Sc	45	450085.8		ppb
V-1	51	2420077.6	147.87606	ppb
V	51	4713913.7	148.07291	ppb
Cr	52	1913959.6	144.22094	ppb
Cr	53	257649.5	147.07401	ppb
Mn	55	3103586.2	141.93033	ppb
Co	59	2280722.2	127.59784	ppb
Ni	60	470328.9	126.84419	ppb
Cu	63	1111690.3	125.58004	ppb
Cu	65	558331.7	138.79623	ppb
As	75	335233.2	115.51759	ppb
Se	77	30684	120.14256	ppb
Se	82	32780.4	110.10447	ppb
Rh	103	909309		ppb
Cd	111	467675.4	104.4679	ppb
Cd	114	1108259.5	103.24023	ppb
Sb	121	1514148.3	111.15758	ppb
Sb	123	1163375	110.11118	ppb
Ho	165	1689729.2		ppb
Tl	205	6253352.4	112.7821	ppb
Pb	208	8412026.6	115.85745	ppb
Kr	83	-30486.4		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: Standard 3

Sample Date: Monday, August 01, 2011 09:39:09

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	147092.6		ppb
Be	9	434161.4	498.84107	ppb
Sc	45	431815		ppb
V-1	51	10593753	499.12881	ppb
V	51	21034530	499.18712	ppb
Cr	52	8735515.5	499.42564	ppb
Cr	53	1035381.5	498.90755	ppb
Mn	55	13835826	498.99863	ppb
Co	59	10084369	498.64599	ppb
Ni	60	2111123	498.97643	ppb
Cu	63	4947422.9	498.8315	ppb
Cu	65	2469578.9	498.7167	ppb
As	75	1514055.3	499.06145	ppb
Se	77	122650.2	499.38689	ppb
Se	82	150612.3	499.43615	ppb
Rh	103	860999		ppb
Cd	111	2184360.9	499.74042	ppb
Cd	114	5097566.1	499.43887	ppb
Sb	121	7114511.6	499.16959	ppb
Sb	123	5454727.7	499.12682	ppb
Ho	165	1656726.4		ppb
Tl	205	28863456	498.80849	ppb
Pb	208	38933482	498.88086	ppb
Kr	83	-142190		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Da Monday, August 01, 2011 09:41:34

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	150646.6			ppb
Be	9	146	0.15756		ppb
Sc	45	433673.6			ppb
V-1	51	112304.4	0.53023		ppb
V	51	118533.6	0.35893		ppb
Cr	52	23019.5	0.33796		ppb
Cr	53	36643.4	1.67882		ppb
Mn	55	39535.7	0.13433		ppb
Co	59	3120.3	0.1377		ppb
Ni	60	1321.8	0.12577		ppb
Cu	63	5438	0.16343		ppb
Cu	65	3174.6	0.18296		ppb
As	75	72	0.11111		ppb
Se	77	5273.2	1.47853		ppb
Se	82	92.1	0.16807		ppb
Rh	103	897031			ppb
Cd	111	623.5	0.13131		ppb
Cd	114	1479.5	0.13716		ppb
Sb	121	2017.6	0.13301		ppb
Sb	123	1578.8	0.13587		ppb
Ho	165	1657810.9			ppb
Tl	205	8769.2	0.1495		ppb
Pb	208	20169.4	0.14671		ppb
Kr	83	54.7			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 2

Sample Da Monday, August 01, 2011 09:43:59

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	147127.7			ppb
Be	9	974.4	1.1123		ppb
Sc	45	415847.4			ppb
V-1	51	127646.4	1.46904		ppb
V	51	151693.9	1.25996		ppb
Cr	52	39224.5	1.31691		ppb
Cr	53	37398.1	2.76991		ppb
Mn	55	64051.5	1.0759		ppb
Co	59	22071.8	1.07973		ppb
Ni	60	5316.9	1.08162		ppb
Cu	63	14646.5	1.11303		ppb
Cu	65	7971.8	1.17662		ppb
As	75	3138.3	1.12162		ppb
Se	77	5278.2	2.38005		ppb
Se	82	335.7	0.98693		ppb
Rh	103	861681.7			ppb
Cd	111	4665.9	1.0606		ppb
Cd	114	11251.1	1.09894		ppb
Sb	121	15420.7	1.11366		ppb
Sb	123	11761.5	1.10776		ppb
Ho	165	1597148.4			ppb
Tl	205	63639.4	1.13873		ppb
Pb	208	93245.5	1.12789		ppb
Kr	83	-198			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 3

Sample Date: Monday, August 01, 2011 09:46:24

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	141611.1			ppb
Be	9	211244.2	252.10241		ppb
Sc	45	401475.4			ppb
V-1	51	501571.2	251.60626		ppb
V	51	9922932.3	251.81459		ppb
Cr	52	4161379.6	255.13237		ppb
Cr	53	503811.8	253.23233		ppb
Mn	55	6413751.2	247.89368		ppb
Co	59	4747740.3	252.20316		ppb
Ni	60	965690.2	245.12357		ppb
Cu	63	2388432.4	258.52694		ppb
Cu	65	1172213.3	254.07737		ppb
As	75	707455.1	250.55027		ppb
Se	77	58935.4	248.14992		ppb
Se	82	68757.3	244.88929		ppb
Rh	103	801484.7			ppb
Cd	111	990114.8	243.32573		ppb
Cd	114	2379532.4	250.45453		ppb
Sb	121	3312069.5	249.07671		ppb
Sb	123	2522404.7	247.39199		ppb
Ho	165	1545670.7			ppb
Tl	205	13533960	250.69953		ppb
Pb	208	18233989	250.37827		ppb
Kr	83	-65163.4			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Monday, August 01, 2011 09:48:49

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	153072			ppb
Be	9	96269.4	106.2806		ppb
Sc	45	423780.7			ppb
V-1	51	2327091.3	104.98291		ppb
V	51	4527103.6	104.54227		ppb
Cr	52	1816057.6	102.07803		ppb
Cr	53	246483.7	105.53257		ppb
Mn	55	2952444.3	104.48247		ppb
Co	59	2179138.8	106.6936		ppb
Ni	60	446083.6	104.27294		ppb
Cu	63	1065868.9	106.13791		ppb
Cu	65	533459.7	106.33728		ppb
As	75	317371.1	103.66139		ppb
Se	77	29840.2	105.17371		ppb
Se	82	31602.2	103.67953		ppb
Rh	103	869418.9			ppb
Cd	111	450618.1	102.08824		ppb
Cd	114	1074278	104.23412		ppb
Sb	121	1467674.7	103.57138		ppb
Sb	123	1122784.8	103.32834		ppb
Ho	165	1647251.8			ppb
Tl	205	6197924.2	107.72499		ppb
Pb	208	8366089	107.73252		ppb
Kr	83	-29743.6			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 5

Sample Date: Monday, August 01, 2011 09:51:16

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	143892.7			ppb
Be	9	42788.1	50.24618		ppb
Sc	45	408289.4			ppb
V-1	51	1081351.9	47.75968		ppb
V	51	2048711.5	47.38575		ppb
Cr	52	839286.6	48.02445		ppb
Cr	53	131981.5	51.00653		ppb
Mn	55	1329048.4	47.68964		ppb
Co	59	949944.4	47.81891		ppb
Ni	60	204140.3	48.97549		ppb
Cu	63	490146.9	49.99615		ppb
Cu	65	245636.5	50.12262		ppb
As	75	143087.8	48.10441		ppb
Se	77	16106.6	49.49626		ppb
Se	82	13951.2	46.99001		ppb
Rh	103	845561.4			ppb
Cd	111	203074.8	47.30072		ppb
Cd	114	479211	47.8043		ppb
Sb	121	664271.8	49.38446		ppb
Sb	123	507732.8	49.22887		ppb
Ho	165	1563412.4			ppb
Tl	205	2720681.8	49.826		ppb
Pb	208	3667117.9	49.69549		ppb
Kr	83	98.7			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 6

Sample Date: Monday, August 01, 2011 09:53:40

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	154368.3			ppb
Be	9	14.3	0.00876		ppb
Sc	45	494623.5			ppb
V-1	51	104797.9	-0.03939		ppb
V	51	112093.5	0.09001		ppb
Cr	52	39089.2	1.11877		ppb
Cr	53	35696.6	0.41765		ppb
Mn	55	128692.8	3.01577		ppb
Co	59	21324	0.95328		ppb
Ni	60	14962	3.05976		ppb
Cu	63	28353.8	2.25175		ppb
Cu	65	14426.8	2.23265		ppb
As	75	-274.4	0.00431		ppb
Se	77	7742.3	10.01703		ppb
Se	82	-49.5	-0.27563		ppb
Rh	103	941815.8			ppb
Cd	111	1879.3	0.38728		ppb
Cd	114	11150.1	0.99641		ppb
Sb	121	1910.9	0.11318		ppb
Sb	123	1483.3	0.11466		ppb
Ho	165	1824032.4			ppb
Tl	205	2162.3	0.03189		ppb
Pb	208	60605.7	0.59379		ppb
Kr	83	67.8			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 7

Sample Date: Monday, August 01, 2011 09:56:05

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	143655.6		ppb
- Be	9	7104.8	8.35146	ppb
- Sc	45	454664.5		ppb
- V-1	51	741915	30.37496	ppb
- V	51	1377915.2	30.21482	ppb
- Cr	52	374435.5	20.33195	ppb
- Cr	53	76049.5	21.6714	ppb
- Mn	55	625065.8	21.16486	ppb
- Co	59	603294	29.56116	ppb
- Ni	60	122488.1	28.53565	ppb
- Cu	63	187059.6	18.34743	ppb
- Cu	65	92797.3	18.15932	ppb
- As	75	61843.5	20.2912	ppb
- Se	77	12649.5	33.14082	ppb
- Se	82	6084.2	19.87902	ppb
> Rh	103	868558.2		ppb
- Cd	111	60747.5	13.76991	ppb
- Cd	114	149410.7	14.50871	ppb
- Sb	121	138891	9.42031	ppb
- Sb	123	106303.3	9.40302	ppb
> Ho	165	1712271		ppb
- Tl	205	545893.8	9.12584	ppb
- Pb	208	747180.2	9.15423	ppb
- Kr	83	-2959.1		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 8

Sample Date: Monday, August 01, 2011 09:58:30

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	223693		ppb
- Be	9	369	0.27184	ppb
- Sc	45	648341.1		ppb
- V-1	51	183508.3	0.96768	ppb
- V	51	196123	0.62733	ppb
- Cr	52	50959.5	0.93311	ppb
- Cr	53	59520.2	3.05897	ppb
- Mn	55	54151.8	0.01014	ppb
- Co	59	9967.8	0.3034	ppb
- Ni	60	22151.6	3.16447	ppb
- Cu	63	46576.7	2.63263	ppb
- Cu	65	23737.6	2.62566	ppb
- As	75	723.7	0.23997	ppb
- Se	77	9145.6	4.73886	ppb
- Se	82	140.1	0.1706	ppb
> Rh	103	1350371.3		ppb
- Cd	111	2139.4	0.30609	ppb
- Cd	114	4728.2	0.29301	ppb
- Sb	121	7509.1	0.33206	ppb
- Sb	123	5804.8	0.33482	ppb
> Ho	165	2562157.8		ppb
- Tl	205	26146.9	0.29011	ppb
- Pb	208	88767.8	0.62387	ppb
- Kr	83	-84.2		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 2

Sample Da Monday, August 01, 2011 10:00:56

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear Report Unit
Li	6	147833.4		ppb
Be	9	935	1.06199	ppb
Sc	45	435932.2		ppb
V-1	51	157974.1	2.58113	ppb
V	51	182136.1	1.7951	ppb
Cr	52	42876.2	1.41844	ppb
Cr	53	47028	6.53026	ppb
Mn	55	67131	1.08079	ppb
Co	59	22925.9	1.07225	ppb
Ni	60	5387.9	1.04246	ppb
Cu	63	15230.7	1.10459	ppb
Cu	65	8189	1.14804	ppb
As	75	2989.8	1.02942	ppb
Se	77	6990	8.32701	ppb
Se	82	365.4	1.03222	ppb
Rh	103	901154.2		ppb
Cd	111	4784.6	1.0398	ppb
Cd	114	11488.7	1.07306	ppb
Sb	121	15567.3	1.09027	ppb
Sb	123	12012.1	1.09724	ppb
Ho	165	1646773		ppb
Tl	205	63343.6	1.09922	ppb
Pb	208	92626	1.08259	ppb
Kr	83	-204		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-1 FH

Sample Da Monday, August 01, 2011 10:08:12

Sample De AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear Report Unit
Li	6	147056.3		ppb
Be	9	2846.8	3.2644	ppb
Sc	45	527419.4		ppb
Cr	52	3603734.3	216.34803	ppb
Cr	53	437781.3	213.28872	ppb
Mn	55	2135989.3	80.0581	ppb
Co	59	180963.2	9.40964	ppb
Ni	60	779507.7	193.85861	ppb
As	75	97541.4	33.92561	ppb
Se	77	38377.9	151.10745	ppb
Se	82	43747	152.61934	ppb
Rh	103	817877.7		ppb
Cd	111	18743.9	4.50812	ppb
Cd	114	39722.4	4.09489	ppb
Sb	121	110930.8	7.80453	ppb
Sb	123	84684.3	7.77012	ppb
Ho	165	1650307.1		ppb
Pb	208	2163488.9	27.7259	ppb
Kr	83	-8688.4		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-2 FH

Sample Date: Monday, August 01, 2011 10:10:37

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	126168.8			ppb
Be	9	2984.2	3.99102		ppb
Sc	45	559506.6			ppb
Cr	52	1158106.8	80.15078		ppb
Cr	53	155859.8	78.86648		ppb
Mn	55	1839395.9	80.03319		ppb
Co	59	160246.7	9.67502		ppb
Ni	60	254238.5	73.28602		ppb
As	75	97416.2	39.31435		ppb
Se	77	31946.1	145.36577		ppb
Se	82	36990	149.81234		ppb
Rh	103	704234.5			ppb
Cd	111	18121.1	5.06193		ppb
Cd	114	37846.3	4.5315		ppb
Sb	121	131213.3	9.77083		ppb
Sb	123	100112.9	9.72072		ppb
Ho	165	1559575.3			ppb
Pb	208	4387285	59.6284		ppb
Kr	83	-14533.4			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-2 FH

Sample Date: Monday, August 01, 2011 10:13:02

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	116313.9			ppb
Be	9	2954.5	4.28557		ppb
Sc	45	516598.1			ppb
Cr	52	1081899.4	82.74664		ppb
Cr	53	144788.7	81.39166		ppb
Mn	55	1756507.2	84.52487		ppb
Co	59	155406.6	10.36616		ppb
Ni	60	240570.3	76.62792		ppb
As	75	88341.4	39.36583		ppb
Se	77	29154.7	146.67461		ppb
Se	82	33888.3	151.53612		ppb
Rh	103	637815.3			ppb
Cd	111	16768	5.17154		ppb
Cd	114	35415.9	4.68184		ppb
Sb	121	125389.5	9.72083		ppb
Sb	123	94806.3	9.58601		ppb
Ho	165	1497895.3			ppb
Pb	208	4260735.1	60.28862		ppb
Kr	83	-13906.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 FH

Sample Date: Monday, August 01, 2011 10:15:27

Sample Description: AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
>	Li	6	122901.1		ppb
	Be	9	5477.6	7.52736	ppb
	Sc	45	613913.9		ppb
	Cr	52	1333692.5	92.04833	ppb
	Cr	53	176121	90.76402	ppb
	Mn	55	3079445.4	134.27812	ppb
	Co	59	277169.7	16.67062	ppb
	Ni	60	289668.9	83.1978	ppb
	As	75	146885.2	59.01254	ppb
	Se	77	32305.3	146.54101	ppb
	Se	82	37654.5	151.90321	ppb
>	Rh	103	707373.6		ppb
	Cd	111	32025.5	8.91322	ppb
	Cd	114	66328.6	7.90822	ppb
	Sb	121	245217.5	17.43544	ppb
	Sb	123	185684.4	17.21811	ppb
>	Ho	165	1634020.1		ppb
	Pb	208	4325998.1	56.10339	ppb
	Kr	83	-23395.8		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 FH

Sample Date: Monday, August 01, 2011 10:17:52

Sample Description: AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
>	Li	6	123863.7		ppb
	Be	9	39658	54.10215	ppb
	Sc	45	640696.3		ppb
	Cr	52	2063666.6	142.66475	ppb
	Cr	53	259567.6	140.96734	ppb
	Mn	55	4284162.8	186.9348	ppb
	Co	59	1057464.7	63.51793	ppb
	Ni	60	454390.2	130.35264	ppb
	As	75	264685.9	106.06674	ppb
	Se	77	41751.7	194.84187	ppb
	Se	82	48682.8	196.04325	ppb
>	Rh	103	708643.6		ppb
	Cd	111	205598.7	57.14053	ppb
	Cd	114	479483.3	57.07754	ppb
	Sb	121	843044.5	60.01742	ppb
	Sb	123	642382	59.6437	ppb
>	Ho	165	1632593.3		ppb
	Pb	208	7831454.4	101.74806	ppb
	Kr	83	-24539.3		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-4 FH

Sample Date: Monday, August 01, 2011 10:20:16

Sample Description: AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
V	Li	6	106999.3			ppb
T	Be	9	2826.1	4.45514		ppb
T	Sc	45	456049.8			ppb
	Cr	52	744565.8	61.99728		ppb
	Cr	53	105270.8	61.40885		ppb
	Mn	55	1382018	72.50054		ppb
	Co	59	145385.8	10.59947		ppb
	Ni	60	162870.6	56.66641		ppb
	As	75	74852.3	36.49398		ppb
	Se	77	18067	92.94882		ppb
	Se	82	20007.7	97.81991		ppb
V	Rh	103	583248.6			ppb
	Cd	111	18723.3	6.31831		ppb
T	Cd	114	40086.8	5.7952		ppb
T	Sb	121	112534.1	9.71984		ppb
	Sb	123	86001.5	9.68686		ppb
V	Ho	165	1344704.9			ppb
T	Pb	208	2267385.8	35.70086		ppb
	Kr	83	-9262.3			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-5 FH

Sample Date: Monday, August 01, 2011 10:22:41

Sample Description: AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
V	Li	6	114203.1			ppb
T	Be	9	2675.4	3.95204		ppb
T	Sc	45	459397.2			ppb
	Cr	52	1709406	134.31062		ppb
	Cr	53	219725	135.0615		ppb
	Mn	55	1778091.8	87.56302		ppb
	Co	59	185641.3	12.66897		ppb
	Ni	60	489243.5	159.61002		ppb
	As	75	71251.3	32.5234		ppb
	Se	77	16752.8	78.03761		ppb
	Se	82	18446.4	84.39353		ppb
V	Rh	103	623283.2			ppb
	Cd	111	17976	5.67482		ppb
T	Cd	114	38390.8	5.19338		ppb
T	Sb	121	106134.3	8.43976		ppb
	Sb	123	80725.9	8.37202		ppb
V	Ho	165	1460344.4			ppb
T	Pb	208	2144227.4	31.06528		ppb
	Kr	83	-9652			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-5 FH

Sample Da: Monday, August 01, 2011 10:25:06

Sample De: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	115222.8			ppb
- Be	9	2644.4	3.87179		ppb
- Sc	45	462203.6			ppb
- Cr	52	1718043.7	133.45117		ppb
- Cr	53	220308.2	133.74967		ppb
- Mn	55	1791453.1	87.21119		ppb
- Co	59	186283.1	12.56783		ppb
- Ni	60	486025.8	156.75163		ppb
- As	75	71396.8	32.21844		ppb
- Se	77	16813.9	77.27935		ppb
- Se	82	18510.2	83.70848		ppb
> Rh	103	630519.4			ppb
- Cd	111	18243	5.69325		ppb
- Cd	114	38531.6	5.15271		ppb
- Sb	121	107101.9	8.31236		ppb
- Sb	123	82406.3	8.34101		ppb
> Ho	165	1496205.2			ppb
- Pb	208	2156939.6	30.5002		ppb
- Kr	83	-10015.3			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Da: Monday, August 01, 2011 10:27:34

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	123339.3			ppb
- Be	9	10.7	0.00769		ppb
- Sc	45	322618.6			ppb
- V-1	51	68784.6	-0.41015		ppb
- V	51	71155.8	-0.18276		ppb
- Cr	52	11787.3	-0.06385		ppb
- Cr	53	22285.6	-1.63008		ppb
- Mn	55	25743.7	-0.04703		ppb
- Co	59	255	0.00532		ppb
- Ni	60	755	0.05399		ppb
- Cu	63	2815.1	-0.00011		ppb
- Cu	65	1768.8	0.02416		ppb
- As	75	-602.7	-0.1659		ppb
- Se	77	3196.6	-2.63037		ppb
- Se	82	41.7	0.05124		ppb
> Rh	103	672850.7			ppb
> Cd	111	39.4	0.00559		ppb
- Cd	114	73	0.00679		ppb
- Sb	121	209	0.00851		ppb
- Sb	123	338.4	0.02751		ppb
> Ho	165	1419655			ppb
- Tl	205	656.4	0.01117		ppb
- Pb	208	9120.5	0.02464		ppb
- Kr	83	58.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Monday, August 01, 2011 10:29:59

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
> Li	6	126914.9		ppb
- Be	9	80803.2	107.58677	ppb
- Sc	45	339136.1		ppb
- V-1	51	1681025.4	93.24716	ppb
- V	51	3270320.3	93.0954	ppb
- Cr	52	1377059	95.62332	ppb
- Cr	53	184636.8	96.54992	ppb
- Mn	55	2238365.2	97.82854	ppb
- Co	59	1704163.6	103.13957	ppb
- Ni	60	367002.4	106.04207	ppb
- Cu	63	897809.2	110.52286	ppb
- Cu	65	441743.7	108.85828	ppb
- As	75	247155.2	99.79553	ppb
- Se	77	22643.8	97.4196	ppb
- Se	82	25059.3	101.61707	ppb
> Rh	103	703345.2		ppb
- Cd	111	379989.2	106.40665	ppb
- Cd	114	901373	108.09896	ppb
- Sb	121	1231759	96.58059	ppb
- Sb	123	946042.2	96.73731	ppb
> Ho	165	1482494.6		ppb
- Tl	205	5510482.3	106.41472	ppb
- Pb	208	7411071.4	106.05022	ppb
- Kr	83	-24143.3		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6 FH

Sample Date: Monday, August 01, 2011 10:32:26

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
> Li	6	116239.9		ppb
- Be	9	4129.9	5.99729	ppb
- Sc	45	544383.5		ppb
- Cr	52	2752751.3	207.2793	ppb
- Cr	53	335931.7	204.70221	ppb
- Mn	55	2257372.9	106.54589	ppb
- Co	59	236665.7	15.4466	ppb
- Ni	60	457267.7	142.62647	ppb
- As	75	99721.5	43.48733	ppb
- Se	77	14347	60.26318	ppb
- Se	82	14473.3	63.27072	ppb
> Rh	103	651996.9		ppb
- Cd	111	21962.6	6.62952	ppb
- Cd	114	45775.9	5.92036	ppb
- Sb	121	171604.1	12.80288	ppb
- Sb	123	130704.5	12.71855	ppb
> Ho	165	1556854.5		ppb
- Pb	208	3002456.2	40.8371	ppb
- Kr	83	-16070.8		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6 FH

Sample Date: Monday, August 01, 2011 10:34:51

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	112740.8		ppb
Be	9	35874.3	53.77846	ppb
Sc	45	522483.2		ppb
Cr	52	3211471.1	250.39513	ppb
Cr	53	387944.3	247.69137	ppb
Mn	55	3082020.1	151.007	ppb
Co	59	916012.8	61.87443	ppb
Ni	60	582269.1	187.93058	ppb
As	75	196588.6	88.61176	ppb
Se	77	21025.6	101.68684	ppb
Se	82	23691.6	107.24435	ppb
Rh	103	630167		ppb
Cd	111	178267.4	55.71686	ppb
Cd	114	415778.8	55.65786	ppb
Sb	121	702265.9	53.85507	ppb
Sb	123	540400.8	54.04496	ppb
Ho	165	1515588.9		ppb
Pb	208	6319282.8	88.42623	ppb
Kr	83	-15620		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-7 FH

Sample Date: Monday, August 01, 2011 10:37:16

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	109761.4		ppb
Be	9	1543.5	2.36893	ppb
Sc	45	366045.4		ppb
Cr	52	1495432.3	122.33874	ppb
Cr	53	193911.3	122.91666	ppb
Mn	55	1268730.9	64.77465	ppb
Co	59	108794.8	7.73107	ppb
Ni	60	122006	41.33881	ppb
As	75	40515.5	19.30337	ppb
Se	77	15927.9	77.10739	ppb
Se	82	17016.4	81.09596	ppb
Rh	103	598272.5		ppb
Cd	111	10215.1	3.35715	ppb
Cd	114	21446.7	3.02147	ppb
Sb	121	59877.9	5.00077	ppb
Sb	123	45937.4	5.00352	ppb
Ho	165	1389416.5		ppb
Pb	208	1185487.8	18.00577	ppb
Kr	83	-6890.2		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-8 FH

Sample Da Monday, August 01, 2011 10:39:41

Sample De AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
▽	Li	6	114151.1		ppb
┆	Be	9	3189.6	4.71542	ppb
┆	Sc	45	448745.1		ppb
┆	Cr	52	2380892.4	185.95942	ppb
┆	Cr	53	289934.7	181.71401	ppb
┆	Mn	55	2085818.9	102.11103	ppb
┆	Co	59	185803.3	12.58048	ppb
┆	Ni	60	208826.9	67.49086	ppb
┆	As	75	88752.1	40.17225	ppb
┆	Se	77	22996.4	113.49316	ppb
┆	Se	82	26333.5	119.57273	ppb
▽	Rh	103	628244.3		ppb
┆	Cd	111	22861.1	7.16165	ppb
┆	Cd	114	50142.8	6.73006	ppb
┆	Sb	121	168426.3	13.1654	ppb
┆	Sb	123	129802.9	13.2336	ppb
▽	Ho	165	1486116.5		ppb
┆	Pb	208	2722189.1	38.78335	ppb
	Kr	83	-11991.7		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-8 FH

Sample Da Monday, August 01, 2011 10:42:06

Sample De AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
▽	Li	6	113293.4		ppb
┆	Be	9	3159.5	4.70607	ppb
┆	Sc	45	461219.1		ppb
┆	Cr	52	2426884.5	188.6084	ppb
┆	Cr	53	298088.3	186.23906	ppb
┆	Mn	55	2147448.6	104.61882	ppb
┆	Co	59	191030.2	12.86797	ppb
┆	Ni	60	212116.8	68.20596	ppb
┆	As	75	90194.3	40.61554	ppb
┆	Se	77	23335.2	114.76952	ppb
┆	Se	82	26660.1	120.438	ppb
▽	Rh	103	631510.4		ppb
┆	Cd	111	23181.9	7.22474	ppb
┆	Cd	114	50191.4	6.70218	ppb
┆	Sb	121	170758.2	13.07865	ppb
┆	Sb	123	130700.3	13.05507	ppb
▽	Ho	165	1516696.5		ppb
┆	Pb	208	2762213.3	38.5594	ppb
	Kr	83	-12458.1		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9 FH

Sample Da Monday, August 01, 2011 10:44:30

Sample De AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
▽	Li	6	108961.5			ppb
┆	Be	9	2972.8	4.60407		ppb
┆	Sc	45	458999.3			ppb
┆	Cr	52	1697520.4	141.017		ppb
┆	Cr	53	217255.3	141.85994		ppb
┆	Mn	55	1802551.3	93.90166		ppb
┆	Co	59	164729.1	11.88036		ppb
┆	Ni	60	188830.3	65.00291		ppb
┆	As	75	72145.4	34.7985		ppb
┆	Se	77	14838.8	71.77304		ppb
┆	Se	82	16055.2	77.61596		ppb
▽	Rh	103	589746			ppb
┆	Cd	111	18714.2	6.24436		ppb
┆	Cd	114	40535.7	5.79543		ppb
┆	Sb	121	110636.3	8.7598		ppb
┆	Sb	123	85876.1	8.86777		ppb
▽	Ho	165	1467047.3			ppb
┆	Pb	208	2348716.2	33.89119		ppb
	Kr	83	-11588.2			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9 FH

Sample Da Monday, August 01, 2011 10:46:55

Sample De AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
▽	Li	6	106097.2			ppb
┆	Be	9	32795.1	52.23125		ppb
┆	Sc	45	446008.1			ppb
┆	Cr	52	2239420	185.70009		ppb
┆	Cr	53	275019.4	183.11804		ppb
┆	Mn	55	2644029.4	137.85056		ppb
┆	Co	59	806898.6	58.04404		ppb
┆	Ni	60	319837.3	109.85422		ppb
┆	As	75	163816.7	78.63782		ppb
┆	Se	77	21655.4	113.46602		ppb
┆	Se	82	24919.9	120.1325		ppb
▽	Rh	103	591710.1			ppb
┆	Cd	111	165012.2	54.92254		ppb
┆	Cd	114	391132.1	55.75726		ppb
┆	Sb	121	615306.7	49.1768		ppb
┆	Sb	123	471390.6	49.13452		ppb
▽	Ho	165	1454116			ppb
┆	Pb	208	5522284.8	80.52694		ppb
	Kr	83	-11125.2			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-10 FH

Sample Da Monday, August 01, 2011 10:49:20

Sample De AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	118429.6			ppb
Be	9	227.7	0.31822		ppb
Sc	45	319995.9			ppb
Cr	52	119731	8.25426		ppb
Cr	53	32193.9	5.62267		ppb
Mn	55	191390.4	8.02774		ppb
Co	59	13976.7	0.91463		ppb
Ni	60	38716.9	12.08384		ppb
As	75	24164.2	10.75122		ppb
Se	77	20145.3	94.26867		ppb
Se	82	22979.9	101.91554		ppb
Rh	103	643062.8			ppb
Cd	111	3820.3	1.16404		ppb
Cd	114	8474.4	1.1092		ppb
Sb	121	49404.6	3.99189		ppb
Sb	123	37659.6	3.96827		ppb
Ho	165	1435508.6			ppb
Pb	208	233046.5	3.33589		ppb
Kr	83	-1112.5			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 FH

Sample Da Monday, August 01, 2011 10:51:45

Sample De AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	121969.1			ppb
Be	9	412.7	0.56479		ppb
Sc	45	339369.8			ppb
Cr	52	193427.3	13.20894		ppb
Cr	53	39559.2	9.28883		ppb
Mn	55	345428.8	14.69769		ppb
Co	59	21077.1	1.31906		ppb
Ni	60	76534.5	22.91674		ppb
As	75	37187.9	15.72524		ppb
Se	77	20947.4	93.23086		ppb
Se	82	24319.6	102.79891		ppb
Rh	103	674736.9			ppb
Cd	111	6298.5	1.83259		ppb
Cd	114	13942.5	1.74069		ppb
Sb	121	43774.1	3.34478		ppb
Sb	123	33820.2	3.37053		ppb
Ho	165	1517319			ppb
Pb	208	431580.4	5.92793		ppb
Kr	83	-2135.7			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 FH

Sample Date: Monday, August 01, 2011 10:54:10

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	112058.1			ppb
Be	9	376.3	0.56088		ppb
Sc	45	307672.2			ppb
Cr	52	191859.8	14.72896		ppb
Cr	53	39426.7	12.11347		ppb
Mn	55	348894.2	16.73265		ppb
Co	59	20904.7	1.46162		ppb
Ni	60	75529.1	25.26561		ppb
As	75	35653.1	16.82391		ppb
Se	77	20404.6	103.09297		ppb
Se	82	23717.1	111.92986		ppb
Rh	103	604472			ppb
Cd	111	6243.2	2.02855		ppb
Cd	114	13849.1	1.93034		ppb
Sb	121	43705.5	3.69376		ppb
Sb	123	33288.3	3.66932		ppb
Ho	165	1372120.5			ppb
Pb	208	429759	6.53971		ppb
Kr	83	-2085			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Monday, August 01, 2011 10:56:38

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	120198			ppb
Be	9	10.3	0.00758		ppb
Sc	45	306623			ppb
Cr	52	11314.4	-0.06075		ppb
Cr	53	22382.2	-0.91835		ppb
Mn	55	24007.7	-0.07676		ppb
Co	59	224	0.00398		ppb
Ni	60	602	0.01568		ppb
Cu	63	2597.4	-0.01305		ppb
Cu	65	1629.5	0.00731		ppb
As	75	-575.7	-0.16541		ppb
Se	77	3122.5	-2.26022		ppb
Se	82	33.1	0.021		ppb
Rh	103	643504.2			ppb
Cd	111	52.3	0.01002		ppb
Cd	114	91.1	0.00954		ppb
Sb	121	173.7	0.00609		ppb
Sb	123	129.8	0.00566		ppb
Ho	165	1368095.3			ppb
Tl	205	583	0.01006		ppb
Pb	208	8258.8	0.0163		ppb
Kr	83	47.1			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Da Monday, August 01, 2011 10:59:02

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	120971.8		ppb
Be	9	77761.5	108.62313	ppb
Sc	45	310204.7		ppb
V-1	51	1519839.6	90.84182	ppb
V	51	2952403.1	90.61386	ppb
Cr	52	1250138.7	93.64162	ppb
Cr	53	168621.1	94.89863	ppb
Mn	55	1997444.4	94.12312	ppb
Co	59	1583000.4	103.36644	ppb
Ni	60	343786.4	107.17309	ppb
Cu	63	836246.1	111.06274	ppb
Cu	65	409238.7	108.80563	ppb
As	75	224688.2	97.87366	ppb
Se	77	20819.5	96.46734	ppb
Se	82	23016	100.68414	ppb
Rh	103	651944.9		ppb
Cd	111	353561.7	106.8218	ppb
Cd	114	846831.7	109.56699	ppb
Sb	121	1151261.3	94.70077	ppb
Sb	123	882314.3	94.65509	ppb
Ho	165	1413071.3		ppb
Tl	205	5297149.1	107.33393	ppb
Pb	208	7089134	106.42595	ppb
Kr	83	-22206.2		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12 FH

Sample Da Monday, August 01, 2011 11:01:30

Sample De AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	111446.5		ppb
Be	9	437.7	0.65671	ppb
Sc	45	315412.3		ppb
Cr	52	192114	15.0749	ppb
Cr	53	39097.6	12.45905	ppb
Mn	55	336048	16.43201	ppb
Co	59	25067.5	1.79274	ppb
Ni	60	53260.6	18.14307	ppb
As	75	36152.6	17.41043	ppb
Se	77	21221.4	110.71236	ppb
Se	82	24638.2	118.69895	ppb
Rh	103	592071.7		ppb
Cd	111	5600.8	1.85728	ppb
Cd	114	12418.2	1.76737	ppb
Sb	121	69457.1	5.78969	ppb
Sb	123	53532.4	5.82022	ppb
Ho	165	1392462.9		ppb
Pb	208	457803.4	6.86976	ppb
Kr	83	-2221.7		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12 FH

Sample Date: Monday, August 01, 2011 11:03:55

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	114523.1		ppb
Be	9	33437.1	49.33203	ppb
Sc	45	320211.2		ppb
Cr	52	724617.8	58.07256	ppb
Cr	53	100866.9	55.46802	ppb
Mn	55	1183828	59.60205	ppb
Co	59	731861.8	51.43087	ppb
Ni	60	202188.4	67.77575	ppb
As	75	124653.3	58.48192	ppb
Se	77	26779.7	141.23941	ppb
Se	82	32222.3	151.7911	ppb
Rh	103	605681.8		ppb
Cd	111	154323.1	50.18151	ppb
Cd	114	371487.4	51.73967	ppb
Sb	121	568147.6	47.00554	ppb
Sb	123	432764.3	46.6954	ppb
Ho	165	1404768.5		ppb
Pb	208	3684637.9	55.58157	ppb
Kr	83	-2144.6		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-1 BH

Sample Date: Monday, August 01, 2011 11:06:20

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	103059.1		ppb
Be	9	15	0.0177	ppb
Sc	45	285007.4		ppb
Cr	52	43152.2	2.37622	ppb
Cr	53	21482	-1.53089	ppb
Mn	55	94961.1	3.35144	ppb
Co	59	2182.9	0.13346	ppb
Ni	60	5329.9	1.51	ppb
As	75	7361.6	3.33016	ppb
Se	77	16083.6	71.07764	ppb
Se	82	18463.6	81.73407	ppb
Rh	103	644085		ppb
Cd	111	10214.4	3.11749	ppb
Cd	114	24617	3.22198	ppb
Sb	121	12871.4	1.06713	ppb
Sb	123	9792.7	1.05876	ppb
Ho	165	1390934.4		ppb
Pb	208	53175.5	0.70004	ppb
Kr	83	97.5		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-2 BH

Sample Date: Monday, August 01, 2011 11:08:45

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	101700.5		ppb
Be	9	9	0.00807	ppb
Sc	45	301405.9		ppb
Cr	52	37352.2	1.7838	ppb
Cr	53	20440	-2.9277	ppb
Mn	55	129096.2	4.67765	ppb
Co	59	4680.2	0.28247	ppb
Ni	60	5489	1.47021	ppb
As	75	16209.3	6.85865	ppb
Se	77	31455.3	148.86062	ppb
Se	82	38394.5	161.2811	ppb
Rh	103	679305.8		ppb
Cd	111	1517.8	0.43414	ppb
Cd	114	3346.8	0.41323	ppb
Sb	121	5027.4	0.39474	ppb
Sb	123	3845	0.39366	ppb
Ho	165	1448858.8		ppb
Pb	208	58815.5	0.75018	ppb
Kr	83	105.4		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-2 BH

Sample Date: Monday, August 01, 2011 11:11:10

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	106218.4		ppb
Be	9	9.3	0.00794	ppb
Sc	45	311802.9		ppb
Cr	52	38512.7	1.79075	ppb
Cr	53	20034.4	-3.53133	ppb
Mn	55	133712.9	4.71989	ppb
Co	59	4773.6	0.28008	ppb
Ni	60	5857.2	1.53211	ppb
As	75	16325.2	6.71822	ppb
Se	77	32400	149.12814	ppb
Se	82	39786.8	162.50958	ppb
Rh	103	698600.3		ppb
Cd	111	1520.4	0.42275	ppb
Cd	114	3454	0.41468	ppb
Sb	121	5105.8	0.39579	ppb
Sb	123	3963.1	0.40076	ppb
Ho	165	1467751.1		ppb
Pb	208	60918.3	0.76957	ppb
Kr	83	168		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 BH

Sample Date: Monday, August 01, 2011 11:13:35

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	111280.8			ppb
Be	9	13.7	0.01388		ppb
Sc	45	330032.6			ppb
Cr	52	123711.8	7.40863		ppb
Cr	53	29721.8	1.57931		ppb
Mn	55	186645.4	6.70095		ppb
Co	59	2744.1	0.14874		ppb
Ni	60	10938.2	2.86781		ppb
As	75	33197.1	12.95936		ppb
Se	77	37389.7	166.32007		ppb
Se	82	46050	179.55844		ppb
Rh	103	731874			ppb
Cd	111	2750.6	0.73451		ppb
Cd	114	6547.5	0.75233		ppb
Sb	121	6560.7	0.50017		ppb
Sb	123	4977.1	0.49477		ppb
Ho	165	1498859.5			ppb
Pb	208	190073.1	2.581		ppb
Kr	83	17.9			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 BH

Sample Date: Monday, August 01, 2011 11:16:00

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas. Report	Unit
Li	6	113108.4			ppb
Be	9	32901.1	49.15041		ppb
Sc	45	338130.5			ppb
Cr	52	759320.3	49.3789		ppb
Cr	53	105071.4	44.60876		ppb
Mn	55	1193935.6	48.69345		ppb
Co	59	809604.2	46.29504		ppb
Ni	60	188794.9	51.45773		ppb
As	75	221294.1	84.44301		ppb
Se	77	58288.3	265.53432		ppb
Se	82	73447.3	281.65046		ppb
Rh	103	744351.7			ppb
Cd	111	164690.5	43.57461		ppb
Cd	114	389637.5	44.15401		ppb
Sb	121	603736.2	46.80952		ppb
Sb	123	461300.1	46.6455		ppb
Ho	165	1498926.2			ppb
Pb	208	3785614.4	53.51374		ppb
Kr	83	22.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-4 BH

Sample Date: Monday, August 01, 2011 11:18:25

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	115938.1			ppb
Be	9	23.7	0.0276		ppb
Sc	45	351996.8			ppb
Cr	52	42583.5	1.80618		ppb
Cr	53	20697.2	-4.27269		ppb
Mn	55	150359.3	4.85551		ppb
Co	59	4201	0.22201		ppb
Ni	60	7008.4	1.68272		ppb
As	75	23534.3	8.78125		ppb
Se	77	47321.5	204.65106		ppb
Se	82	58474.3	217.27241		ppb
Rh	103	768099.9			ppb
Cd	111	1939.2	0.49132		ppb
Cd	114	3779	0.41262		ppb
Sb	121	9950.4	0.7523		ppb
Sb	123	7786.2	0.76782		ppb
Ho	165	1520515.5			ppb
Pb	208	77387.1	0.96926		ppb
Kr	83	209.7			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-5 BH

Sample Date: Monday, August 01, 2011 11:20:50

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	111307.8			ppb
Be	9	7	0.00372		ppb
Sc	45	340342.6			ppb
Cr	52	45368.9	2.12139		ppb
Cr	53	21197.7	-3.44		ppb
Mn	55	145641.2	4.94042		ppb
Co	59	2550.4	0.13714		ppb
Ni	60	6461	1.61774		ppb
As	75	28131.9	10.96613		ppb
Se	77	59466.5	275.51531		ppb
Se	82	73471.5	285.80494		ppb
Rh	103	733764.3			ppb
Cd	111	623.5	0.16144		ppb
Cd	114	450.8	0.04944		ppb
Sb	121	15568.3	1.24428		ppb
Sb	123	11735.9	1.22297		ppb
Ho	165	1444537.4			ppb
Pb	208	68399.5	0.89379		ppb
Kr	83	259.4			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-5 BH

Sample Date: Monday, August 01, 2011 11:23:14

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	121609.7			ppb
Be	9	6	0.00143		ppb
Sc	45	372735			ppb
Cr	52	46424.6	1.93361		ppb
Cr	53	21468.7	-4.32085		ppb
Mn	55	148777.7	4.5503		ppb
Co	59	2452	0.11964		ppb
Ni	60	6287.8	1.42512		ppb
As	75	28136.1	10.06668		ppb
Se	77	60605.3	256.20273		ppb
Se	82	75000	267.56771		ppb
Rh	103	800079.8			ppb
Cd	111	618.2	0.14622		ppb
Cd	114	445.3	0.04457		ppb
Sb	121	15197.7	1.14337		ppb
Sb	123	11632.1	1.14129		ppb
Ho	165	1533489.8			ppb
Pb	208	66106.5	0.8036		ppb
Kr	83	286			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Monday, August 01, 2011 11:25:42

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	147782.7			ppb
Be	9	3.7	-0.00274		ppb
Sc	45	399188.8			ppb
V	51	67036.6	-0.70747		ppb
Cr	52	14599	-0.06649		ppb
Cr	53	23245.4	-3.90364		ppb
Mn	55	32200.6	-0.03892		ppb
Co	59	148.3	-0.00328		ppb
Ni	60	721.4	0.00102		ppb
Cu	63	3162.6	-0.03493		ppb
Cu	65	3583.4	0.31304		ppb
As	75	-907.4	-0.22077		ppb
Se	77	4248	-1.4222		ppb
Se	82	54.8	0.06141		ppb
Rh	103	835863.3			ppb
Cd	111	19.3	-0.00143		ppb
Cd	114	40.7	0.00174		ppb
Sb	121	88.3	-0.00242		ppb
Sb	123	61.3	-0.00304		ppb
Ho	165	1661533.2			ppb
Tl	205	223.7	0.00178		ppb
Pb	208	9021.7	0.00353		ppb
Kr	83	86			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Da Monday, August 01, 2011 11:28:07

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	151403.2			ppb
Be	9	99498.9	111.05675		ppb
Sc	45	419533.1			ppb
V-1	51	2209018.9	98.46571		ppb
V	51	4317961.4	98.66588		ppb
Cr	52	1776938.8	98.93935		ppb
Cr	53	233522.1	98.09846		ppb
Mn	55	2864505.5	100.38254		ppb
Co	59	2138417.3	103.73708		ppb
Ni	60	444890.6	103.03647		ppb
Cu	63	1069485.3	105.52101		ppb
Cu	65	536902.4	106.04793		ppb
As	75	309892.9	100.29681		ppb
Se	77	28811.9	99.76158		ppb
Se	82	31474.8	102.31295		ppb
Rh	103	877467.4			ppb
Cd	111	467572.2	104.94932		ppb
Cd	114	1112503.1	106.94767		ppb
Sb	121	1513714	98.99233		ppb
Sb	123	1155087.4	98.51467		ppb
Ho	165	1777297.7			ppb
Tl	205	6598950.2	106.30249		ppb
Pb	208	8897539.5	106.18731		ppb
Kr	83	-29451.8			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6 BH

Sample Da Monday, August 01, 2011 11:30:34

Sample De AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	125207.6			ppb
Be	9	16.7	0.01555		ppb
Sc	45	380266.2			ppb
Cr	52	49519.6	2.02391		ppb
Cr	53	23798.2	-3.49424		ppb
Mn	55	148212.9	4.33905		ppb
Co	59	2325.6	0.10883		ppb
Ni	60	15953	3.75088		ppb
As	75	19470.5	6.76623		ppb
Se	77	39923.5	155.99209		ppb
Se	82	47809.8	164.92202		ppb
Rh	103	827256			ppb
Cd	111	537.9	0.12211		ppb
Cd	114	979.5	0.09753		ppb
Sb	121	7900.1	0.57242		ppb
Sb	123	5996.5	0.56648		ppb
Ho	165	1580618.1			ppb
Pb	208	54077.4	0.61468		ppb
Kr	83	243.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6 BH

Sample Date: Monday, August 01, 2011 11:32:59

Sample From: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	124804.7			ppb
Be	9	34505	46.7146		ppb
Sc	45	381628.2			ppb
Cr	52	766951.7	45.17914		ppb
Cr	53	106808.4	39.92235		ppb
Mn	55	1306322.2	48.33403		ppb
Co	59	886137.4	45.97888		ppb
Ni	60	207623.6	51.34986		ppb
As	75	229367.9	79.42536		ppb
Se	77	62628	258.38123		ppb
Se	82	76541.1	266.33325		ppb
Rh	103	820309.1			ppb
Cd	111	165731.8	39.78888		ppb
Cd	114	392996.9	40.40977		ppb
Sb	121	635707.3	47.18105		ppb
Sb	123	485976	47.03905		ppb
Ho	165	1565958.8			ppb
Pb	208	3783508.6	51.18965		ppb
Kr	83	281.3			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-7 BH

Sample Date: Monday, August 01, 2011 11:35:23

Sample From: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	130157.8			ppb
Be	9	573.4	0.7372		ppb
Sc	45	412708.3			ppb
Cr	52	2749960.8	162.76931		ppb
Cr	53	336987	158.29322		ppb
Mn	55	493865.3	17.31787		ppb
Co	59	41600.4	2.12657		ppb
Ni	60	157791.7	38.59807		ppb
As	75	67747.3	23.29331		ppb
Se	77	42718.2	168.021		ppb
Se	82	51643.9	177.89185		ppb
Rh	103	828449.5			ppb
Cd	111	6655.5	1.57644		ppb
Cd	114	15038.5	1.52877		ppb
Sb	121	49528.2	3.52566		ppb
Sb	123	38067.9	3.53412		ppb
Ho	165	1628969			ppb
Pb	208	824256.6	10.6323		ppb
Kr	83	-2168.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-8 BH

Sample Date: Monday, August 01, 2011 11:37:48

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	118433.3		ppb
Be	9	14	0.01307	ppb
Sc	45	357626.7		ppb
Cr	52	943049.2	59.96972	ppb
Cr	53	127624.7	55.72096	ppb
Mn	55	155883.2	5.116	ppb
Co	59	7308.3	0.39655	ppb
Ni	60	62287.7	16.42871	ppb
As	75	27362	10.25112	ppb
Se	77	57397	254.0449	ppb
Se	82	69639.7	260.27075	ppb
Rh	103	763676.1		ppb
Cd	111	838.3	0.21025	ppb
Cd	114	1322.3	0.14368	ppb
Sb	121	8757.9	0.68935	ppb
Sb	123	6696.1	0.68743	ppb
Ho	165	1458525.3		ppb
Pb	208	118772.5	1.61754	ppb
Kr	83	144.3		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-8 BH

Sample Date: Monday, August 01, 2011 11:40:13

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intensity	Conc.	Meas. Report Unit
Li	6	135280		ppb
Be	9	10	0.00556	ppb
Sc	45	408539.2		ppb
Cr	52	982708	54.51957	ppb
Cr	53	132926.4	49.28648	ppb
Mn	55	156731.9	4.34374	ppb
Co	59	7259.9	0.34278	ppb
Ni	60	64895.1	14.93959	ppb
As	75	29264.6	9.58894	ppb
Se	77	59617.8	228.718	ppb
Se	82	72154.6	235.62079	ppb
Rh	103	874048.1		ppb
Cd	111	725.8	0.15762	ppb
Cd	114	1375.8	0.13041	ppb
Sb	121	9140.9	0.63585	ppb
Sb	123	6860.4	0.62214	ppb
Ho	165	1648802.2		ppb
Pb	208	121125	1.44811	ppb
Kr	83	96.8		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9 BH

Sample Date: Monday, August 01, 2011 11:42:37

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	132837.2			ppb
Be	9	23	0.02243		ppb
Sc	45	407020.5			ppb
Cr	52	365912.9	20.22851		ppb
Cr	53	61535.6	15.07597		ppb
Mn	55	167969.6	4.89212		ppb
Co	59	5070.8	0.24241		ppb
Ni	60	45454	10.67396		ppb
As	75	23156.4	7.78503		ppb
Se	77	56305.2	220.69158		ppb
Se	82	66840.1	223.61674		ppb
Rh	103	853032.8			ppb
Cd	111	2684.3	0.6139		ppb
Cd	114	6260.9	0.6168		ppb
Sb	121	6735.8	0.4792		ppb
Sb	123	5102.2	0.47332		ppb
Ho	165	1605350.7			ppb
Pb	208	88439.3	1.05809		ppb
Kr	83	113.6			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9 BH

Sample Date: Monday, August 01, 2011 11:45:02

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
Li	6	137860.4			ppb
Be	9	38421.7	47.09187		ppb
Sc	45	427679.3			ppb
Cr	52	1210416.2	64.95323		ppb
Cr	53	161111.2	60.29883		ppb
Mn	55	1506574.6	50.52413		ppb
Co	59	994729.7	46.7294		ppb
Ni	60	258062.6	57.80911		ppb
As	75	247881.6	77.72244		ppb
Se	77	81074.3	306.27433		ppb
Se	82	98627.8	310.73894		ppb
Rh	103	906066.8			ppb
Cd	111	190614.9	41.43261		ppb
Cd	114	450553	41.94403		ppb
Sb	121	692418.3	47.83251		ppb
Sb	123	533046.7	48.02334		ppb
Ho	165	1682387.9			ppb
Pb	208	4063859.7	51.18047		ppb
Kr	83	106.8			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-10 BH

Sample Date: Monday, August 01, 2011 11:47:27

Sample From: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	143166.9			ppb
Be	9	20	0.01681		ppb
Sc	45	411049.5			ppb
Cr	52	57959.2	2.31687		ppb
Cr	53	24385	-3.95797		ppb
Mn	55	225522.7	6.73148		ppb
Co	59	18259	0.87165		ppb
Ni	60	12362.7	2.68232		ppb
As	75	11620.1	3.83195		ppb
Se	77	32419	114.21762		ppb
Se	82	36746.5	119.00414		ppb
Rh	103	880886.1			ppb
Cd	111	1445.1	0.31718		ppb
Cd	114	3001	0.28499		ppb
Sb	121	6932.6	0.44043		ppb
Sb	123	5378.8	0.44574		ppb
Ho	165	1794623.1			ppb
Pb	208	148958	1.65071		ppb
Kr	83	-43.1			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 BH

Sample Date: Monday, August 01, 2011 11:49:52

Sample From: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	152666.9			ppb
Be	9	8.3	0.0023		ppb
Sc	45	436937.6			ppb
Cr	52	145283.4	6.74597		ppb
Cr	53	35885	0.64504		ppb
Mn	55	281347	8.14203		ppb
Co	59	6970	0.307		ppb
Ni	60	21818.5	4.58245		ppb
As	75	10365.5	3.2369		ppb
Se	77	33152.3	109.49493		ppb
Se	82	37418.6	114.31719		ppb
Rh	103	933700.2			ppb
Cd	111	10110.8	2.12717		ppb
Cd	114	23630.2	2.13253		ppb
Sb	121	10271.1	0.62211		ppb
Sb	123	8027.9	0.63426		ppb
Ho	165	1892984.6			ppb
Pb	208	301202.9	3.26677		ppb
Kr	83	-28.3			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-11 BH

Sample Da Monday, August 01, 2011 11:52:16

Sample De AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	153594.7			ppb
- Be	9	7.7	0.0015		ppb
- Sc	45	437373.2			ppb
- Cr	52	144774	6.79136		ppb
- Cr	53	35745.8	0.73498		ppb
- Mn	55	281115.3	8.22348		ppb
- Co	59	6990.4	0.3109		ppb
- Ni	60	21529.8	4.56344		ppb
- As	75	10789.1	3.39623		ppb
- Se	77	33245.3	111.09115		ppb
- Se	82	37480.2	115.59097		ppb
> Rh	103	924960.1			ppb
- Cd	111	9968.7	2.11707		ppb
- Cd	114	23657.6	2.15504		ppb
- Sb	121	10319.2	0.63425		ppb
- Sb	123	7887.2	0.63203		ppb
> Ho	165	1866482.4			ppb
- Pb	208	295056.3	3.24585		ppb
- Kr	83	-37.2			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Da Monday, August 01, 2011 11:54:44

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
> Li	6	155435.8			ppb
- Be	9	3.7	-0.00293		ppb
- Sc	45	443244.4			ppb
- V-1	51	82209.1	-0.98235		ppb
- V	51	81963.2	-0.54771		ppb
- Cr	52	17922.7	0.02099		ppb
- Cr	53	28138.8	-2.87647		ppb
- Mn	55	37467.1	0.01396		ppb
- Co	59	183.3	-0.00245		ppb
- Ni	60	727.4	-0.01568		ppb
- Cu	63	3384	-0.04807		ppb
- Cu	65	3244.9	0.17293		ppb
- As	75	-246.1	0.01254		ppb
- Se	77	5242.8	0.56699		ppb
- Se	82	36.7	-0.01319		ppb
> Rh	103	931505.8			ppb
> Cd	111	40.5	0.00262		ppb
- Cd	114	41.6	0.0014		ppb
- Sb	121	150	0.00123		ppb
- Sb	123	58.9	-0.00361		ppb
> Ho	165	1776877.2			ppb
- Tl	205	260.7	0.00213		ppb
- Pb	208	9788.7	0.0052		ppb
- Kr	83	96.8			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Monday, August 01, 2011 11:57:08

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	153277.7		ppb
- Be	9	99598	109.80171	ppb
- Sc	45	445201.2		ppb
- V-1	51	2406905.2	101.53253	ppb
- V	51	4705483.9	101.68757	ppb
- Cr	52	1953564.7	102.83901	ppb
- Cr	53	255771.5	102.09478	ppb
- Mn	55	3178050.3	105.30755	ppb
- Co	59	2293511.3	105.15156	ppb
- Ni	60	473328.5	103.59878	ppb
- As	75	338557.5	103.54471	ppb
- Se	77	31689.8	104.45869	ppb
- Se	82	33637.5	103.3329	ppb
> Rh	103	928543.5		ppb
- Cd	111	479841.4	101.78329	ppb
- Cd	114	1139527.3	103.52244	ppb
- Sb	121	1560534	101.67012	ppb
- Sb	123	1193860.9	101.43668	ppb
> Ho	165	1784254.4		ppb
- Tl	205	6591004.3	105.76845	ppb
- Pb	208	8809808.7	104.73816	ppb
- Kr	83	-31188.9		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12 BH

Sample Date: Monday, August 01, 2011 11:59:36

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	134766		ppb
- Be	9	18	0.01573	ppb
- Sc	45	384948.6		ppb
- Cr	52	88151	4.44804	ppb
- Cr	53	29644.3	-0.11454	ppb
- Mn	55	294981.8	10.1173	ppb
- Co	59	3588	0.17809	ppb
- Ni	60	23267.7	5.68274	ppb
- As	75	9014.9	3.25093	ppb
- Se	77	25966.7	97.11906	ppb
- Se	82	28441.4	100.31528	ppb
> Rh	103	808647.1		ppb
- Cd	111	610.2	0.14269	ppb
- Cd	114	1303.2	0.1336	ppb
- Sb	121	3489	0.23665	ppb
- Sb	123	2623.8	0.23189	ppb
> Ho	165	1654203.9		ppb
- Pb	208	92043.3	1.06989	ppb
- Kr	83	-323.5		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report
 Sample ID: 17070-12 BH
 Sample Date: Monday, August 01, 2011 12:02:00
 Sample Description: AIRTECH
 Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	151502.2		ppb
- Be	9	39932.8	44.5365	ppb
- Sc	45	421645.7		ppb
- Cr	52	934709.1	50.54022	ppb
- Cr	53	127819.4	45.27866	ppb
- Mn	55	1623514.2	55.19119	ppb
- Co	59	996725.8	47.37129	ppb
- Ni	60	231644.5	52.47848	ppb
- As	75	139234.7	44.1977	ppb
- Se	77	35709.3	125.39916	ppb
- Se	82	40580.5	129.26351	ppb
> Rh	103	895618.9		ppb
- Cd	111	194125.9	42.68712	ppb
- Cd	114	459527.9	43.27774	ppb
- Sb	121	665493.5	41.51264	ppb
- Sb	123	508701.5	41.38731	ppb
> Ho	165	1863138.7		ppb
- Pb	208	4342254	49.38121	ppb
- Kr	83	-319.1		mg/L

Method 6020 & 200.8 Metals Summary Report
 Sample ID: 17070-12FH
 Sample Date: Monday, August 01, 2011 12:04:25
 Sample Description: AES
 Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	158238.8		ppb
- Be	9	305	0.3188	ppb
- Sc	45	474055.4		ppb
- Cr	52	159562.5	7.58988	ppb
- Cr	53	41933.8	3.62257	ppb
- Mn	55	287149.4	8.43761	ppb
- Co	59	17852.8	0.81195	ppb
- Ni	60	37309.7	8.04679	ppb
- As	75	27241.9	8.45535	ppb
- Se	77	19238.7	55.97162	ppb
- Se	82	19148.5	59.06262	ppb
> Rh	103	923863.9		ppb
- Cd	111	3991.7	0.84519	ppb
- Cd	114	8768.3	0.7984	ppb
- Sb	121	48861.3	3.05851	ppb
- Sb	123	37557	3.06616	ppb
> Ho	165	1851740.8		ppb
- Pb	208	297015.1	3.29408	ppb
- Kr	83	-1575.4		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-12FH

Sample Date: Monday, August 01, 2011 12:06:50

Sample Date AES

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	143902.4			ppb
- Be	9	44942.2	52.77235		ppb
- Sc	45	430585.1			ppb
- Cr	52	1013312.8	57.9072		ppb
- Cr	53	143256.9	56.38459		ppb
- Mn	55	1654104.4	59.38532		ppb
- Co	59	1021030.6	51.16751		ppb
- Ni	60	246201.6	58.83345		ppb
- As	75	171531.8	57.39233		ppb
- Se	77	29552.6	106.89702		ppb
- Se	82	32651.9	109.65883		ppb
> Rh	103	849338.5			ppb
- Cd	111	214035	49.62975		ppb
- Cd	114	510063.7	50.65455		ppb
- Sb	121	750196.2	51.71738		ppb
- Sb	123	574369.8	51.64138		ppb
> Ho	165	1685873			ppb
- Pb	208	4406788.3	55.39211		ppb
- Kr	83	-1513.2			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6BH

Sample Date: Monday, August 01, 2011 12:14:04

Sample Date AES

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
> Li	6	134555.4			ppb
- Be	9	13.3	0.00987		ppb
- Sc	45	387282.3			ppb
- Cr	52	36078.5	1.23388		ppb
- Cr	53	26364.9	-2.09374		ppb
- Mn	55	100219.7	2.55251		ppb
- Co	59	1356.1	0.05927		ppb
- Ni	60	8480.6	1.92308		ppb
- As	75	6470.8	2.31738		ppb
- Se	77	20237.5	69.69733		ppb
- Se	82	20224	70.0494		ppb
> Rh	103	823043.7			ppb
- Cd	111	272	0.05911		ppb
- Cd	114	539.3	0.0529		ppb
- Sb	121	4020.9	0.29527		ppb
- Sb	123	3071.2	0.29402		ppb
> Ho	165	1538091.2			ppb
- Pb	208	32559.9	0.33771		ppb
- Kr	83	145.9			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6BH

Sample Date: Monday, August 01, 2011 12:16:29

Sample Description: AES

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	161044.2			ppb
Be	9	44994.7	47.21318		ppb
Sc	45	467229.1			ppb
Cr	52	959288.1	46.22249		ppb
Cr	53	133647.3	41.20681		ppb
Mn	55	1579852.5	47.77796		ppb
Co	59	1080061.2	45.81845		ppb
Ni	60	239540.9	48.42606		ppb
As	75	239844.1	67.91409		ppb
Se	77	49481	159.84111		ppb
Se	82	57108.2	162.41401		ppb
Rh	103	1003340			ppb
Cd	111	212684	41.74694		ppb
Cd	114	502860.5	42.27563		ppb
Sb	121	763576.1	47.32689		ppb
Sb	123	584321.9	47.23258		ppb
Ho	165	1875111.4			ppb
Pb	208	4386649.1	49.561		ppb
Kr	83	158.5			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Monday, August 01, 2011 12:23:46

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Mear	Report Unit
Li	6	151680.9			ppb
Be	9	6.7	0.0005		ppb
Sc	45	437700.2			ppb
V-1	51	80031.9	-0.96959		ppb
V	51	79629.2	-0.54487		ppb
Cr	52	18151.4	0.06275		ppb
Cr	53	27385.2	-2.83413		ppb
Mn	55	36848.9	0.03117		ppb
Co	59	286.3	0.00265		ppb
Ni	60	743.7	-0.00712		ppb
Cu	63	3311.3	-0.0453		ppb
Cu	65	3607.7	0.2618		ppb
As	75	-435.6	-0.0483		ppb
Se	77	5082.1	0.54977		ppb
Se	82	35.4	-0.01401		ppb
Rh	103	903726.5			ppb
Cd	111	44.6	0.00373		ppb
Cd	114	105.9	0.0075		ppb
Sb	121	144.3	0.00095		ppb
Sb	123	104.7	0.0004		ppb
Ho	165	1756468			ppb
Tl	205	601.4	0.00773		ppb
Pb	208	10022.8	0.00939		ppb
Kr	83	96.5			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Monday, August 01, 2011 12:26:11

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	153545.7		ppb
Be	9	100698	110.82008	ppb
Sc	45	440736.1		ppb
V-1	51	2370433.3	101.27281	ppb
V	51	4628688	101.30953	ppb
Cr	52	1924578.4	102.61695	ppb
Cr	53	253276.8	102.45535	ppb
Mn	55	3145245.9	105.57886	ppb
Co	59	2254214.7	104.69028	ppb
Ni	60	465411.2	103.18567	ppb
As	75	336472.4	104.2436	ppb
Se	77	31474.4	105.22796	ppb
Se	82	33438.2	104.04594	ppb
> Rh	103	916620.4		ppb
Cd	111	475030	102.07004	ppb
Cd	114	1119500.3	103.02233	ppb
Sb	121	1530911.8	101.30938	ppb
Sb	123	1178008.4	101.66854	ppb
> Ho	165	1756480.9		ppb
Tl	205	6436607	104.92271	ppb
Pb	208	8743497.5	105.59147	ppb
Kr	83	-30995.5		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3BH

Sample Date: Monday, August 01, 2011 12:29:18

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	156871.9		ppb
Be	9	37.3	0.03342	ppb
Sc	45	418401.6		ppb
Cr	52	50420.8	1.82827	ppb
Cr	53	28712.9	-2.18373	ppb
Mn	55	62324.9	0.91221	ppb
Co	59	1144.7	0.04307	ppb
Ni	60	3088.9	0.52214	ppb
As	75	5182.8	1.71848	ppb
Se	77	10169	21.14102	ppb
Se	82	7689.3	24.21278	ppb
> Rh	103	902202.1		ppb
Cd	111	746.4	0.15689	ppb
Cd	114	1805.9	0.16647	ppb
Sb	121	1725.2	0.10622	ppb
Sb	123	1341.3	0.1078	ppb
> Ho	165	1746410.2		ppb
Pb	208	47861.5	0.47008	ppb
Kr	83	82.9		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3BH

Sample Date: Monday, August 01, 2011 12:31:43

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	151334.5		ppb
- Be	9	44411.2	49.5876	ppb
- Sc	45	409299.9		ppb
- Cr	52	863618	48.19897	ppb
- Cr	53	123444.2	45.14046	ppb
- Mn	55	1372315.6	48.03766	ppb
- Co	59	957465.1	47.00826	ppb
- Ni	60	206192.9	48.24218	ppb
- As	75	170664.5	55.94464	ppb
- Se	77	25983.8	89.31237	ppb
- Se	82	27797.2	91.43948	ppb
> Rh	103	866934		ppb
- Cd	111	202780.6	46.06795	ppb
- Cd	114	480890.5	46.79018	ppb
- Sb	121	678750.8	46.73492	ppb
- Sb	123	521166.7	46.80087	ppb
> Ho	165	1687926.4		ppb
- Pb	208	3942094.7	49.47866	ppb
- Kr	83	76.4		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6BH

Sample Date: Monday, August 01, 2011 12:34:08

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
> Li	6	150894.3		ppb
- Be	9	18	0.01323	ppb
- Sc	45	419893.7		ppb
- Cr	52	28838.3	0.6725	ppb
- Cr	53	27055.5	-2.77528	ppb
- Mn	55	48421.6	0.45803	ppb
- Co	59	878.7	0.03126	ppb
- Ni	60	4106.9	0.76609	ppb
- As	75	2506.3	0.88803	ppb
- Se	77	10200.1	21.8918	ppb
- Se	82	7197.4	23.00159	ppb
> Rh	103	888661.8		ppb
- Cd	111	177.3	0.03333	ppb
- Cd	114	304.1	0.02649	ppb
- Sb	121	2105.9	0.13502	ppb
- Sb	123	1861.6	0.15692	ppb
> Ho	165	1704159.9		ppb
- Pb	208	18705.6	0.12127	ppb
- Kr	83	79.8		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6BH

Sample Date Monday, August 01, 2011 12:36:33

Sample Description AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	151343.8		ppb
Be	9	44887.2	50.11612	ppb
Sc	45	419380.2		ppb
Cr	52	882275.3	47.81572	ppb
Cr	53	126993.5	45.08635	ppb
Mn	55	1398163.8	47.52048	ppb
Co	59	980395.6	46.7486	ppb
Ni	60	211397	48.03655	ppb
As	75	180516.8	57.46908	ppb
Se	77	27405.2	91.9782	ppb
Se	82	28967.5	92.54578	ppb
Rh	103	892613.6		ppb
Cd	111	209331.1	46.18564	ppb
Cd	114	496164.7	46.88514	ppb
Sb	121	703291.2	47.91803	ppb
Sb	123	541153.2	48.08553	ppb
Ho	165	1705916.3		ppb
Pb	208	4041038.7	50.19237	ppb
Kr	83	108.2		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9BH

Sample Date Monday, August 01, 2011 12:38:57

Sample Description AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	152609.1		ppb
Be	9	16	0.0108	ppb
Sc	45	420638.7		ppb
Cr	52	91960.8	4.13571	ppb
Cr	53	34254.1	0.56483	ppb
Mn	55	47253.5	0.40428	ppb
Co	59	1317.1	0.05175	ppb
Ni	60	9575	2.00167	ppb
As	75	3225.6	1.10943	ppb
Se	77	11617.1	27.33796	ppb
Se	82	9065.1	28.77884	ppb
Rh	103	895613		ppb
Cd	111	639.5	0.13465	ppb
Cd	114	1495.6	0.13849	ppb
Sb	121	1492.1	0.09272	ppb
Sb	123	1137.3	0.09208	ppb
Ho	165	1711905.6		ppb
Pb	208	22049.7	0.16175	ppb
Kr	83	71.7		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9BH

Sample Date: Monday, August 01, 2011 12:41:22

Sample Description: AIRTECH

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	153553.8		ppb
	Be	9	44638	49.11996	ppb
	Sc	45	421992.6		ppb
	Cr	52	944623.4	50.87061	ppb
	Cr	53	133889.9	47.91286	ppb
	Mn	55	1403542.3	47.34107	ppb
	Co	59	985706.3	46.6502	ppb
	Ni	60	219363.9	49.47848	ppb
	As	75	170753.2	53.96088	ppb
	Se	77	27173.6	90.19334	ppb
	Se	82	29344.7	93.05265	ppb
>	Rh	103	899369.7		ppb
	Cd	111	208596.6	45.67913	ppb
	Cd	114	494650.4	46.39356	ppb
	Sb	121	695013.3	46.69294	ppb
	Sb	123	533594.4	46.75332	ppb
>	Ho	165	1729874.7		ppb
	Pb	208	4008566.8	49.09219	ppb
	Kr	83	92.3		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Monday, August 01, 2011 12:43:50

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas	Report Unit
>	Li	6	152196.3		ppb
	Be	9	8.7	0.00272	ppb
	Sc	45	434674.9		ppb
	V-1	51	85201.1	-0.75855	ppb
	V	51	86368.2	-0.4037	ppb
	Cr	52	18247.6	0.06206	ppb
	Cr	53	29222.9	-2.04736	ppb
	Mn	55	36935.9	0.02674	ppb
	Co	59	279	0.00225	ppb
	Ni	60	762	-0.00405	ppb
	Cu	63	3424.3	-0.03646	ppb
	Cu	65	3078.2	0.15593	ppb
	As	75	-340.9	-0.01855	ppb
	Se	77	5193.5	0.87566	ppb
	Se	82	46.7	0.02145	ppb
>	Rh	103	909083.6		ppb
	Cd	111	38.5	0.00239	ppb
	Cd	114	70.6	0.00418	ppb
	Sb	121	106	-0.00157	ppb
	Sb	123	83.6	-0.00141	ppb
>	Ho	165	1752643.6		ppb
	Tl	205	471.7	0.00563	ppb
	Pb	208	9903.4	0.00821	ppb
	Kr	83	93.1		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Da Monday, August 01, 2011 12:46:15

Sample Description:

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Mear Report Unit
∇	Li	6	152265		ppb
T	Be	9	99885.1	110.85367	ppb
T	Sc	45	440755.1		ppb
	V-1	51	2394438.9	101.6171	ppb
	V	51	4674163.9	101.61535	ppb
	Cr	52	1940718.5	102.774	ppb
	Cr	53	256615.5	103.20291	ppb
	Mn	55	3159536.7	105.33174	ppb
	Co	59	2258220.8	104.1617	ppb
	Ni	60	464481	102.2793	ppb
	Cu	63	1086501.7	101.90913	ppb
	Cu	65	538540.2	101.11274	ppb
	As	75	338017.1	104.01024	ppb
	Se	77	31893.2	106.03416	ppb
	Se	82	33839.6	104.58413	ppb
∇	Rh	103	922887.1		ppb
	Cd	111	477671.8	101.94163	ppb
T	Cd	114	1130769.9	103.35037	ppb
T	Sb	121	1550598.2	102.19766	ppb
T	Sb	123	1188168.9	102.13862	ppb
∇	Ho	165	1763802.3		ppb
	Tl	205	6445568.4	104.64139	ppb
T	Pb	208	8755302.3	105.29143	ppb
	Kr	83	-30894.1		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9BH

Sample Da Monday, August 01, 2011 13:04:14

Sample De AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Mear Report Unit
∇	Li	6	152317.1		ppb
T	Be	9	8.7	0.0027	ppb
T	Sc	45	410171.1		ppb
	Cr	52	54687.7	2.15903	ppb
	Cr	53	30945.9	-0.64511	ppb
	Mn	55	34724.9	-0.00083	ppb
	Co	59	748.7	0.02563	ppb
	Ni	60	5079.4	1.00878	ppb
	As	75	1239.4	0.49033	ppb
	Se	77	7462.7	11.18714	ppb
	Se	82	3945.1	12.76938	ppb
∇	Rh	103	873682.4		ppb
	Cd	111	336.9	0.06999	ppb
T	Cd	114	772.4	0.07219	ppb
T	Sb	121	805.4	0.04612	ppb
T	Sb	123	626	0.04683	ppb
∇	Ho	165	1710779.4		ppb
T	Pb	208	14574.9	0.06915	ppb
	Kr	83	57		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-9BH

Sample Da Monday, August 01, 2011 13:06:39

Sample De AIRTECH

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
▽	Li	6	150350.1		ppb
┆	Be	9	45388	51.00889	ppb
┆	Sc	45	406952		ppb
┆	Cr	52	879329.7	49.53849	ppb
┆	Cr	53	127577.3	47.74251	ppb
┆	Mn	55	1352042.4	47.74312	ppb
┆	Co	59	963749.7	47.74009	ppb
┆	Ni	60	208325.6	49.18266	ppb
┆	As	75	156034.7	51.61386	ppb
┆	Se	77	20952.1	68.93994	ppb
┆	Se	82	21182.6	70.2711	ppb
▽	Rh	103	859254.6		ppb
┆	Cd	111	209512.9	48.02332	ppb
┆	Cd	114	498351.2	48.92234	ppb
┆	Sb	121	688408.6	47.27075	ppb
┆	Sb	123	529212	47.39359	ppb
▽	Ho	165	1692580.1		ppb
┆	Pb	208	3951489.2	49.46265	ppb
	Kr	83	115.6		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 bh

Sample Da Monday, August 01, 2011 13:11:29

Sample De AES

Concentration Results

	Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
▽	Li	6	156228.4		ppb
┆	Be	9	12.3	0.00641	ppb
┆	Sc	45	427798.4		ppb
┆	Cr	52	23854.6	0.35783	ppb
┆	Cr	53	29477.4	-2.0182	ppb
┆	Mn	55	24342.2	-0.40993	ppb
┆	Co	59	375	0.00664	ppb
┆	Ni	60	1025.7	0.05352	ppb
┆	As	75	801.3	0.33723	ppb
┆	Se	77	5323.9	1.25786	ppb
┆	Se	82	688.6	2.02418	ppb
▽	Rh	103	915030.2		ppb
┆	Cd	111	289.5	0.05652	ppb
┆	Cd	114	576.6	0.05092	ppb
┆	Sb	121	694.7	0.03759	ppb
┆	Sb	123	521.7	0.0366	ppb
▽	Ho	165	1750155.6		ppb
┆	Pb	208	13292.5	0.04955	ppb
	Kr	83	86.4		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-3 bh

Sample Da Monday, August 01, 2011 13:13:54

Sample De AES

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
> Li	6	147294.7		ppb
- Be	9	4	-0.00233	ppb
- Sc	45	411264.9		ppb
- Cr	52	23941.2	0.43262	ppb
- Cr	53	29215.2	-1.3973	ppb
- Mn	55	1448662.5	50.72361	ppb
- Co	59	1024039.1	50.22423	ppb
- Ni	60	216771.7	50.67241	ppb
- As	75	3952.9	1.38064	ppb
- Se	77	17915	55.30364	ppb
- Se	82	16453.3	54.01577	ppb
> Rh	103	867847.4		ppb
- Cd	111	126.1	0.02265	ppb
- Cd	114	432.2	0.03963	ppb
- Sb	121	314	0.01327	ppb
- Sb	123	217.4	0.01111	ppb
> Ho	165	1668778.6		ppb
- Pb	208	16177.3	0.09407	ppb
- Kr	83	103.6		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6bh

Sample Da Monday, August 01, 2011 13:16:18

Sample De AES

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
> Li	6	157983.4		ppb
- Be	9	6.7	0.00022	ppb
- Sc	45	434865.3		ppb
- Cr	52	21169	0.19146	ppb
- Cr	53	29244	-2.38567	ppb
- Mn	55	22471.4	-0.48811	ppb
- Co	59	301.7	0.00294	ppb
- Ni	60	1180.1	0.08288	ppb
- As	75	-11.6	0.08392	ppb
- Se	77	5229.2	0.48721	ppb
- Se	82	589.5	1.67882	ppb
> Rh	103	932697.1		ppb
- Cd	111	45.3	0.00361	ppb
- Cd	114	62.6	0.00329	ppb
- Sb	121	325.3	0.01272	ppb
- Sb	123	249.7	0.0127	ppb
> Ho	165	1773843.2		ppb
- Pb	208	9646.7	0.00371	ppb
- Kr	83	108.1		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Date: Monday, August 01, 2011 13:18:46

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	152496.2			ppb
Be	9	7	0.00084		ppb
Sc	45	441298.6			ppb
V-1	51	95658	-0.37586		ppb
V	51	97039.2	-0.20754		ppb
Cr	52	19077	0.08586		ppb
Cr	53	32375.5	-0.87487		ppb
Mn	55	37696	0.02614		ppb
Co	59	318	0.00376		ppb
Ni	60	740	-0.01238		ppb
As	75	-196.3	0.02854		ppb
Se	77	5424	1.3536		ppb
Se	82	28.6	-0.03776		ppb
Rh	103	928120.4			ppb
Cd	111	39.1	0.00233		ppb
Cd	114	82.7	0.00516		ppb
Sb	121	131.3	0.00022		ppb
Sb	123	110.3	0.00103		ppb
Ho	165	1728333.6			ppb
Tl	205	450.3	0.00538		ppb
Pb	208	9977.1	0.01079		ppb
Kr	83	111.8			mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Monday, August 01, 2011 13:21:10

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report	Unit
Li	6	150698.8			ppb
Be	9	98859.7	110.85285		ppb
Sc	45	444879.5			ppb
V-1	51	2413790.7	101.34977		ppb
V	51	4706867.8	101.24185		ppb
Cr	52	1969536.3	103.20677		ppb
Cr	53	262131.6	104.48446		ppb
Mn	55	3214778.4	106.05523		ppb
Co	59	2297414.1	104.85631		ppb
Ni	60	473125.5	103.08945		ppb
As	75	344174.4	104.79151		ppb
Se	77	32630.1	107.58948		ppb
Se	82	34425.4	105.27603		ppb
Rh	103	932688.2			ppb
Cd	111	481923.9	101.76858		ppb
Cd	114	1135151.5	102.66015		ppb
Sb	121	1557075.5	103.28306		ppb
Sb	123	1194911.2	103.36932		ppb
Ho	165	1752248.1			ppb
Tl	205	6405307	104.65782		ppb
Pb	208	8584815.9	103.91647		ppb
Kr	83	-30961.7			mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: 17070-6bh

Sample Da Monday, August 01, 2011 13:23:38

Sample De AES

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
Li	6	149330.4		ppb
Be	9	18.7	0.01425	ppb
Sc	45	422326.8		ppb
Cr	52	23308.9	0.35134	ppb
Cr	53	29564.3	-1.72422	ppb
Mn	55	1477719.9	49.95122	ppb
Co	59	1044777.5	49.48784	ppb
Ni	60	222149.7	50.15023	ppb
As	75	4227.5	1.42325	ppb
Se	77	18438.7	54.85526	ppb
Se	82	17102.7	54.22784	ppb
Rh	103	898592.3		ppb
Cd	111	138.1	0.02429	ppb
Cd	114	375.8	0.03289	ppb
Sb	121	616	0.03345	ppb
Sb	123	443.4	0.03087	ppb
Ho	165	1705714.1		ppb
Pb	208	18719.1	0.12149	ppb
Kr	83	106.6		mg/L

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 1

Sample Da Monday, August 01, 2011 13:26:05

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc. Meas	Report Unit
Li	6	150564.4		ppb
Be	9	5.7	-0.00056	ppb
Sc	45	440982.9		ppb
V-1	51	92512	-0.5129	ppb
V	51	92774	-0.301	ppb
Cr	52	18776.7	0.07023	ppb
Cr	53	31594.1	-1.2304	ppb
Mn	55	38483.7	0.05295	ppb
Co	59	601	0.01665	ppb
Ni	60	814.4	0.00391	ppb
As	75	-362.4	-0.02277	ppb
Se	77	5308.9	0.91141	ppb
Se	82	22.2	-0.05725	ppb
Rh	103	927762.9		ppb
Cd	111	39.7	0.00244	ppb
Cd	114	56.9	0.00279	ppb
Sb	121	97	-0.00211	ppb
Sb	123	78.3	-0.0018	ppb
Ho	165	1736602.7		ppb
Tl	205	390.3	0.00436	ppb
Pb	208	9528.9	0.00473	ppb
Kr	83	109.7		mg/L

PerkinElmer ELAN 6100 ICP-MS

Method 6020 & 200.8 Metals Summary Report

Sample ID: QC Std 4

Sample Date: Monday, August 01, 2011 13:28:30

Sample Description:

Concentration Results

Analyte	Mass	Meas. Intens	Conc.	Meas Report Unit
Li	6	149274.1		ppb
Be	9	98464.7	111.46916	ppb
Sc	45	447003.3		ppb
V-1	51	2438680.4	102.65687	ppb
V	51	4757589.1	102.5679	ppb
Cr	52	1977358.3	103.83415	ppb
Cr	53	263127.7	105.18536	ppb
Mn	55	3203790.5	105.90045	ppb
Co	59	2291828.4	104.80581	ppb
Ni	60	469758.9	102.56154	ppb
As	75	344278.7	105.04101	ppb
Se	77	32583.3	107.66171	ppb
Se	82	35117.7	107.61366	ppb
Rh	103	930826.5		ppb
Cd	111	480536.2	101.67739	ppb
Cd	114	1134512.1	102.81178	ppb
Sb	121	1557202.3	103.65403	ppb
Sb	123	1197866.2	103.98937	ppb
Ho	165	1746218.9		ppb
Tl	205	6366271.4	104.37614	ppb
Pb	208	8661709.8	105.21377	ppb
Kr	83	-31133.2		mg/L



AIRTECH

*Environmental
Services Inc.*

**Ohio Lumex Spectrometer
(Mercury)
Analytical Report**

**Performed for
Big Rivers Electric Corporation
Coleman Plant
*Project No. 3648
August 17, 2011***

Analyst: 
Michael Ogletree

Reviewer: 
Patrick Clark P.E.

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Project Summary

General

Project Information	
Date Received	7/25/2011
Analytical Protocol	EPA Method 30B
Total Number of Samples Received	24
Total Number of Blanks Received	NA

Analytical Equipment

Equipment Information	Manufacturer	Model	Serial No.
Zecman Mercury Spectrometer	Ohio Lumex	RA-915+	1283

Parameters	Conditions
Oven Temperature	585° Celsius
Flow Rate	2.0 LPM

Condition of Samples When Received

Samples were received for analysis in good condition. The samples are summarized in the table below:

Sample Description	Trap ID	Spike Amount (ng)	Trap Condition
ESP 1 Run 1	94468	NA	Speciated
ESP 1 Run 1 S	94421	175	Spike
ESP 1 Run 2	94194	NA	Speciated
ESP 1 Run 2 S	94388	175	Spike
ESP 1 Run 3	94345	NA	Speciated
ESP 1 Run 3 S	94232	175	Spike
ESP 2 Run 1	94275	NA	Speciated
ESP 2 Run 1 S	94379	175	Spike
ESP 2 Run 2	94348	NA	Speciated
ESP 2 Run 2 S	94374	175	Spike
ESP 2 Run 3	94340	NA	Speciated
ESP 2 Run 3 S	94377	175	Spike
ESP 3 Run 1	94463	NA	Speciated
ESP 3 Run 1 S	94423	175	Spike
ESP 3 Run 2	94330	NA	Speciated
ESP 3 Run 2 S	94362	175	Spike
ESP 3 Run 3	94333	NA	Speciated
ESP 3 Run 3 S	94385	175	Spike
STACK Run 1	95013	NA	Speciated
STACK Run 1 S	88254	50	Spike
STACK Run 2	94309	NA	Speciated
STACK Run 2 S	88255	50	Spike
STACK Run 3	94337	NA	Speciated
STACK Run 3 S	87330	50	Spike

Methodology

All samples were analyzed according to the EPA Method 30B procedures found in 40 CFR Part 60 Appendix A.

QA/QC

The mercury calibration curve was generated using seven calibration standards. The standards were prepared by using a micro pipette to transfer a known amount of NIST traceable mercury standards to a bed of activated carbon and covered with potassium chloride.

The preparation of the mercury standards used for this project is detailed in the table below. All standards were supplied by Ohio Lumex, Twinsburg, Ohio 44087.

Concentration ($\mu\text{g/ml}$)	Volume (μl)	Final Hg (ng)
0.1	20	2
0.1	50	5
0.1	100	10
1	25	25
1	50	50
1	100	100
10	25	250
10	50	500

An independent calibration standard was analyzed along with the mercury calibration standards; results can be found in the calibration standards spreadsheet.

Continuing calibration standard of 250 ng/ml was analyzed along with samples at least once every ten runs.

Appendix

Includes the following:

- Results
- Calibration Data
- Raw Data
- Chain of Custody

Results

Includes the following:

- **Mercury Results**

Sample Parameters	ESP Outlet 2	ESP Outlet 2	ESP Outlet 2	Blank
	Run 1	Run 2	Run 3	
Oxidized Front Half (area)	3,180	1,590	1,890	9
Oxidized Back Half (area)	644	397	570	N/A
Elemental Front Half (area)	60,800	41,600	43,900	
Elemental Back Half (area)	77	53	81	

RESULTS

Oxidized Front Half (ng)	14.4	7.21	8.57	0.04
Oxidized Back Half (ng)	2.74	1.69	2.43	N/A
Oxidized Breakthrough (%)	16.0	19.0	22.1	N/A
Total Oxidized (ng)	17.2	8.9	11.0	
Elemental Front Half (ng)	276	189	199	
Elemental Back Half (ng)	0.328	0.226	0.345	
Elemental Breakthrough (%)	0.1	0.1	0.2	
Total Elemental (ng)	276	189	199	
Total Mercury (ng)	293	198	210	0.0408

Sample Parameters	ESP Outlet 2	ESP Outlet 2	ESP Outlet 2
	Run 1 Spike	Run 2 Spike	Run 3 Spike
Front Half (area)	104,000	79,600	87,200
Back Half (area)	0	69	0

RESULTS

Front Half (ng)	472	361	396
Back Half (ng)	0.00	0.294	0.00
Breakthrough (%)	0.0	0.1	0.0
Total Mercury (ng)	472	361	396

Analysis Date: 8/3/11

Analyst: MO/JN/BL

Sample Parameters	ESP Outlet 3	ESP Outlet 3	ESP Outlet 3	Blank
	Run 1	Run 2	Run 3	
Oxidized Front Half (area)	2,030	2,170	1,900	30
Oxidized Back Half (area)	450	911	869	N/A
Elemental Front Half (area)	39,800	46,200	44,000	
Elemental Back Half (area)	0	19	134	

RESULTS

Oxidized Front Half (ng)	9.22	9.86	8.63	0.136
Oxidized Back Half (ng)	1.97	3.99	3.80	N/A
Oxidized Breakthrough (%)	17.6	28.8	30.6	N/A
Total Oxidized (ng)	11.2	13.8	12.4	
Elemental Front Half (ng)	181	210	200	
Elemental Back Half (ng)	0.000	0.0832	0.586	
Elemental Breakthrough (%)	0.0	0.0	0.3	
Total Elemental (ng)	181	210	201	
Total Mercury (ng)	192	224	213	0.136

Sample Parameters	ESP Outlet 3	ESP Outlet 3	ESP Outlet 3
	Run 1 Spike	Run 2 Spike	Run 3 Spike
Front Half (area)	81,800	89,400	85,700
Back Half (area)	42	55	238.0

RESULTS

Front Half (ng)	372	406	389
Back Half (ng)	0.184	0.241	1.04
Breakthrough (%)	0.0	0.1	0.3
Total Mercury (ng)	372	406	390

Analysis Date: 8/4/11

Analyst: BL

Sample Parameters	Stack Run 1	Stack Run 2	Stack Run 3	Stack Blank
Oxidized Front Half (area)	2,240	9,220	9,920	30
Oxidized Back Half (area)	1	5	27	N/A
Elemental Front Half (area)	19,000	22,900	24,100	
Elemental Back Half (area)	230	831	270	

RESULTS

Oxidized Front Half (ng)	10.5	43.1	46.4	0.140
Oxidized Back Half (ng)	0.00474	0.0237	0.128	N/A
Oxidized Breakthrough (%)	0.0	0.1	0.3	N/A
Total Oxidized (ng)	10.5	43.1	46.5	
Elemental Front Half (ng)	88.9	107	113	
Elemental Back Half (ng)	1.09	3.94	1.28	
Elemental Breakthrough (%)	1.2	3.5	1.1	
Total Elemental (ng)	89.9	111	114	
Total Mercury (ng)	100	154	161	0.140

Sample Parameters	Stack Run 1 Spike	Stack Run 2 Spike	Stack Run 3 Spike
Front Half (area)	44,700	36,700	37,000
Back Half (area)	350	421	1,220

RESULTS

Front Half (ng)	209	172	173
Back Half (ng)	1.66	2.00	5.78
Breakthrough (%)	0.8	1.1	3.2
Total Mercury (ng)	211	174	179

Calibration Data

Includes the following:

- **Mercury Standards**
- **Mercury Calibration Curves**

GENERAL INFORMATION

Date: 8/2/11 (A)
 Analyzer: Ohio Lumex
 Analyst: JN

INITIAL CALIBRATION

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
1	5	1,180	0.00424	5.35	7.0	Yes
2	10	2,300	0.00435	10.4	4.3	Yes
3	25	5,730	0.00436	26.0	4.0	Yes
4	50	10,700	0.00467	48.5	-2.9	Yes
5	100	21,500	0.00465	97.5	-2.5	Yes
6	250	53,000	0.00472	240	-3.8	Yes
7	500	105,000	0.00476	476	-4.7	Yes

Average Response Factor (ng/area) 0.00454
 R-Squared 1.000

LOW LEVEL STANDARD - FOR QUANTIFICATION BELOW 5 NG

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	2	470	0.00426	2	6.6	NA

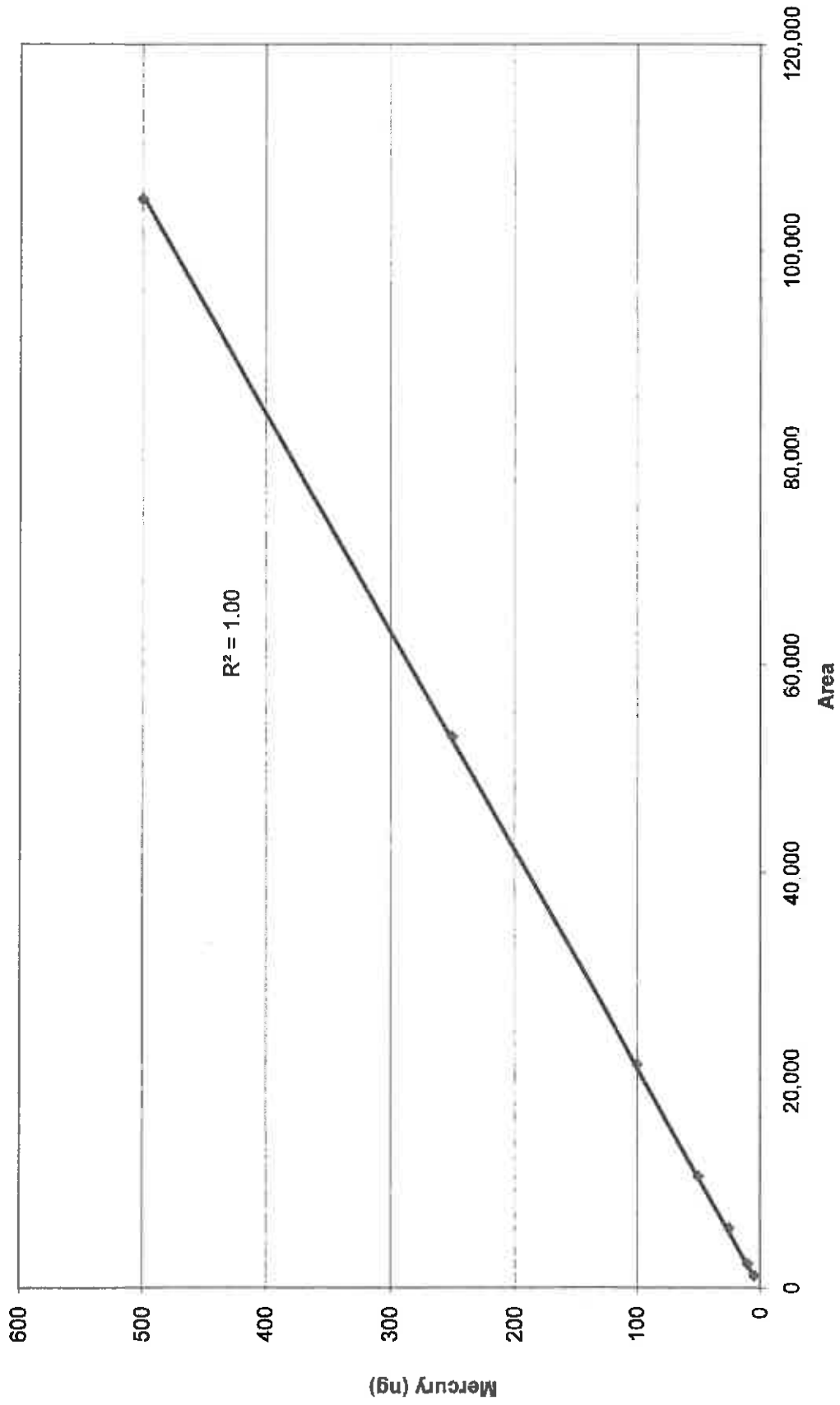
SECOND SOURCE CHECK STANDARD ANALYSIS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	51,800	0.00483	235	-6.0	Yes

CONTINUING CALIBRATION VERIFICATION STANDARDS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	54,700	0.00457	248.11	-0.8	Yes
NA	250	54,500	0.00459	247.20	-1.1	Yes
NA	250	54,000	0.00463	244.94	-2.0	Yes
NA	300	65,000	0.00462	294.83	-1.7	Yes

Mercury Calibration Summary (ESP 1)



GENERAL INFORMATION

Date: 8/2/11 (B)
 Analyzer: Ohio Lumex
 Analyst: JN

INITIAL CALIBRATION

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
1	5	1,180	0.00424	5.35	7.0	Yes
2	10	2,300	0.00435	10.4	4.3	Yes
3	25	5,730	0.00436	26.0	4.0	Yes
4	50	10,700	0.00467	48.5	-2.9	Yes
5	100	21,500	0.00465	97.5	-2.5	Yes
6	250	53,000	0.00472	240	-3.8	Yes
7	500	105,000	0.00476	476	-4.7	Yes

Average Response Factor (ng/area) 0.00454
 R-Squared 1.00

LOW LEVEL STANDARD - FOR QUANTIFICATION BELOW 5 NG

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	2	470	0.00426	2	6.6	NA

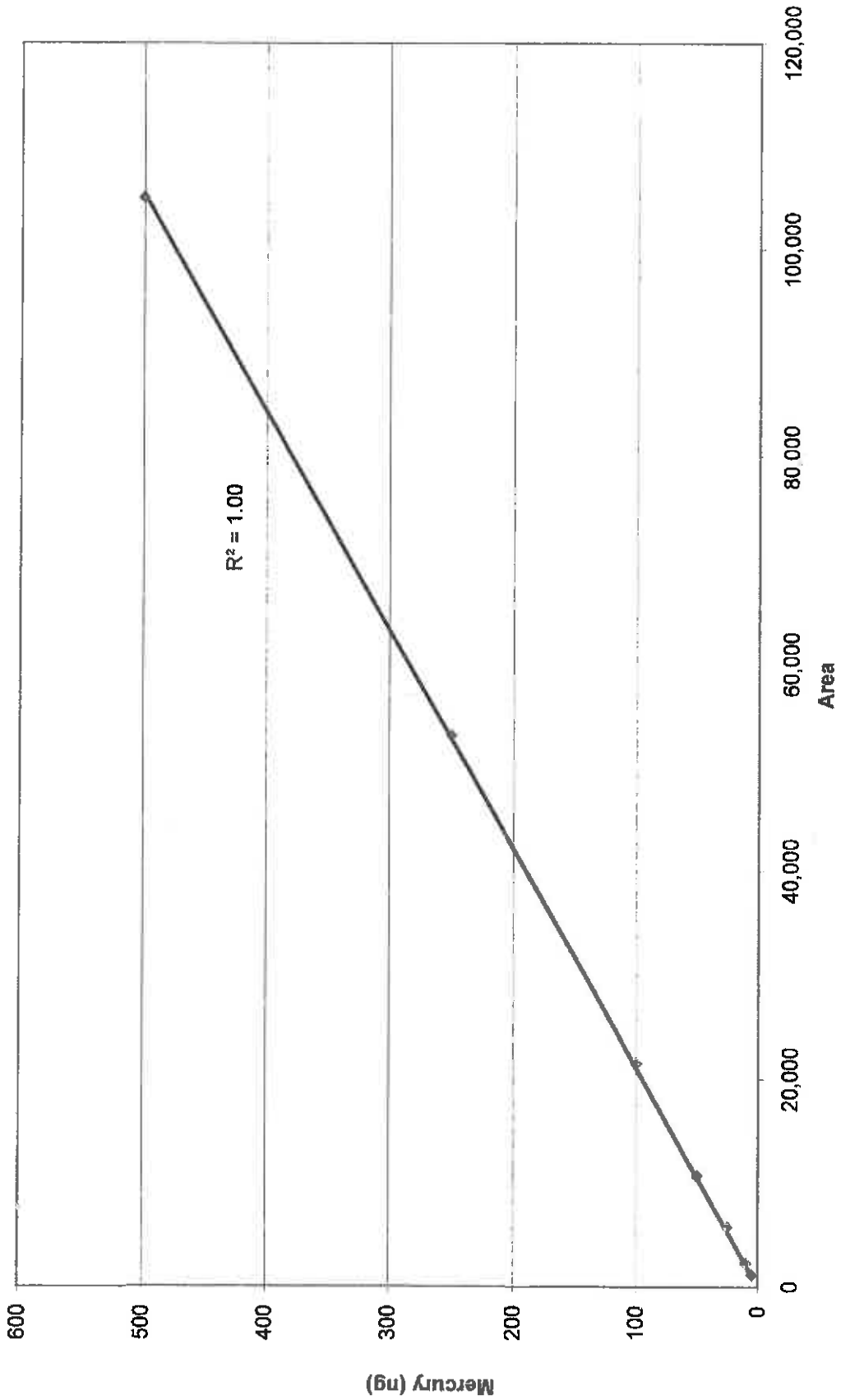
SECOND SOURCE CHECK STANDARD ANALYSIS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	51,800	0.00483	235	-6.0	Yes

CONTINUING CALIBRATION VERIFICATION STANDARDS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	54,000	0.00463	245	-2.0	Yes
NA	300	63,900	0.00469	290	-3.4	Yes
NA	300	63,800	0.00470	289	-3.5	Yes
NA	300	65,000	0.00462	295	-1.7	Yes

Mercury Calibration Summary (ESP 2)



GENERAL INFORMATION

Date: 8/3/11
 Analyzer: Ohio Lumex
 Analyst: MO/JN/BL

INITIAL CALIBRATION

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
1	5	1,160	0.00431	5.27	5.4	Yes
2	10	2,300	0.00435	10.5	4.5	Yes
3	25	5,360	0.00419	27.1	8.3	Yes
4	50	10,900	0.00459	49.5	-1.0	Yes
5	100	21,200	0.00472	96.3	-3.7	Yes
6	250	50,700	0.00493	230	-7.9	Yes
7	500	106,000	0.00472	482	-3.7	Yes

Average Response Factor (ng/area) 0.00454
 R-Squared 0.999

LOW LEVEL STANDARD - FOR QUANTIFICATION BELOW 5 NG

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	2	457	0.00438	2	3.8	NA

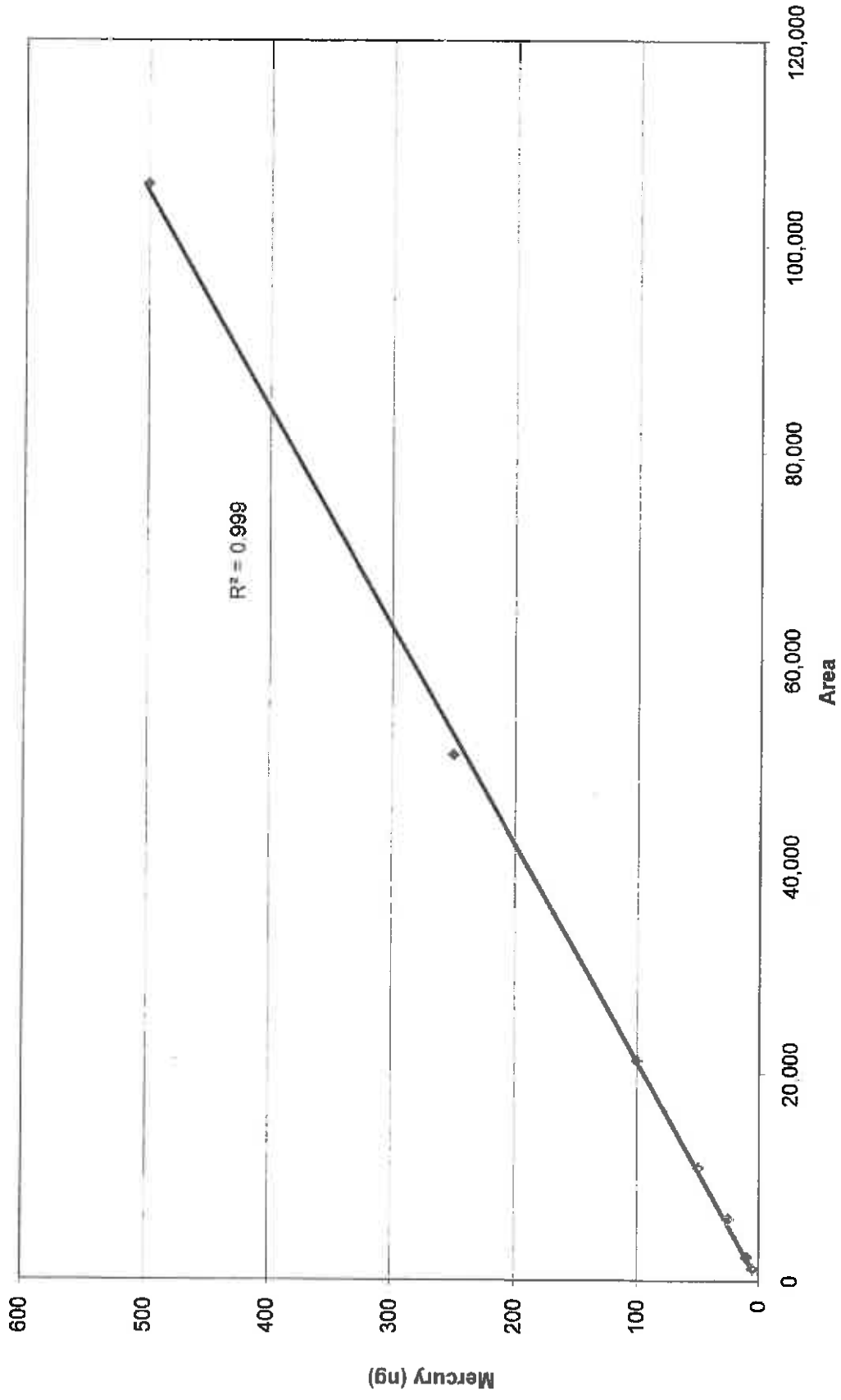
SECOND SOURCE CHECK STANDARD ANALYSIS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	50,100	0.00499	228	-8.9	Yes

CONTINUING CALIBRATION VERIFICATION STANDARDS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	52,200	0.00479	237.17	-5.1	Yes
NA	250	54,900	0.00455	249.44	-0.2	Yes

Mercury Calibration Summary (ESP 3)



GENERAL INFORMATION

Date: 8/4/11
 Analyzer: Ohio Lumex
 Analyst: BL

INITIAL CALIBRATION

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
1	5	1,030	0.00485	4.82	-3.7	Yes
2	10	2,100	0.00476	9.8	-1.8	Yes
3	25	5,540	0.00451	25.9	3.6	Yes
4	50	10,200	0.00490	47.7	-4.6	Yes
5	100	22,500	0.00444	105	5.2	Yes
6	250	53,500	0.00467	250	0.1	Yes
7	500	109,000	0.00459	510	1.9	Yes

Average Response Factor (ng/area) 0.00468
 R-Squared 1.000

LOW LEVEL STANDARD - FOR QUANTIFICATION BELOW 5 NG

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	2	422	0.00474	2	-1.3	NA

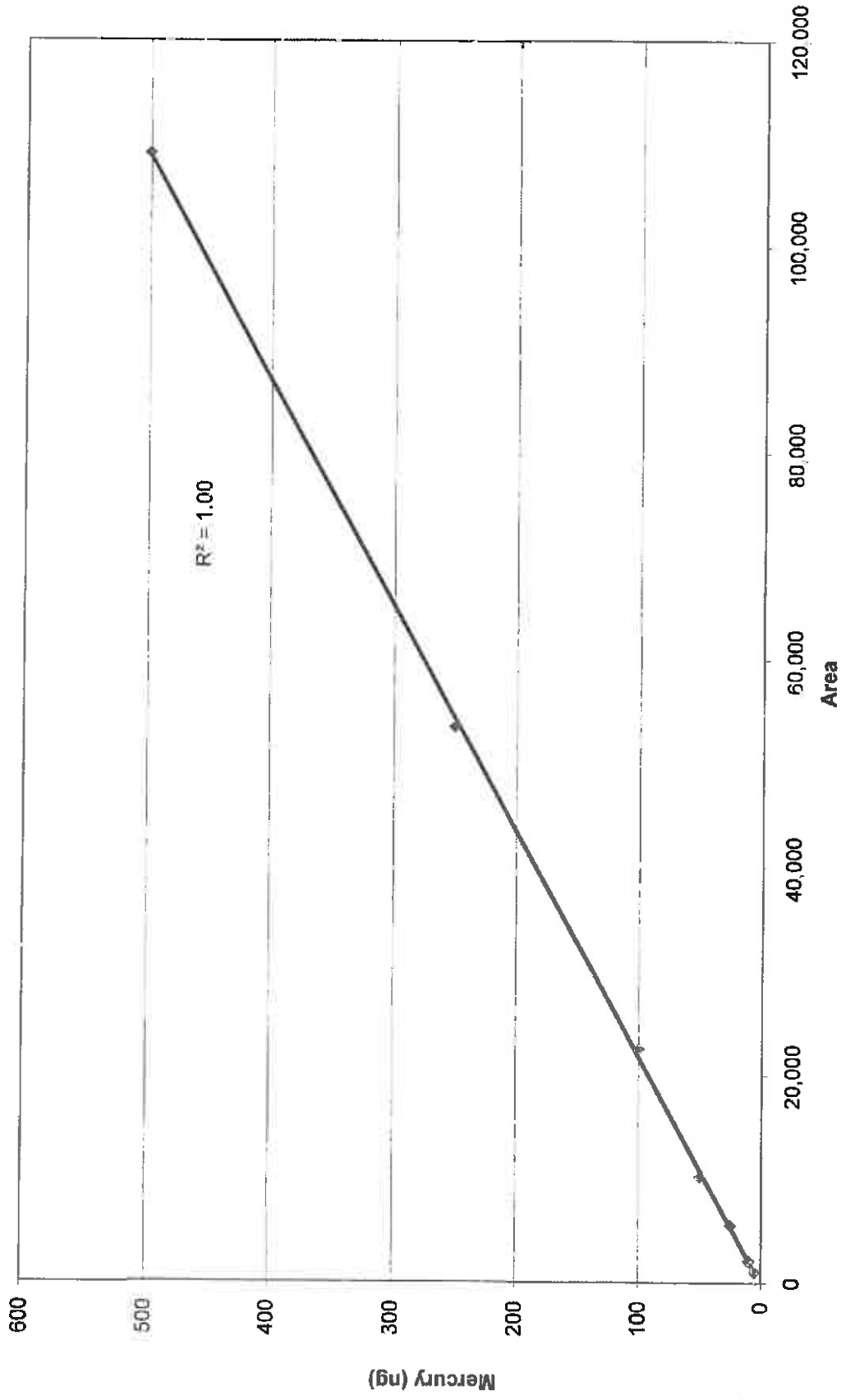
SECOND SOURCE CHECK STANDARD ANALYSIS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	54,300	0.00460	254	1.6	Yes

CONTINUING CALIBRATION VERIFICATION STANDARDS

Standard Number	Amount (ng)	Response (area)	RF (ng/area)	Calculated Value (ng)	Error (%)	Valid?
NA	250	54,600	0.00458	255.34	2.1	Yes

Mercury Calibration Summary (STACK)



Chain of Custody

Includes the following:

- **Field Chain of Custody**



Sorbent Trap Chain of Custody

Plant/Source: Colena Test Location: ESP # 1 R-1

Boiler ID: _____ Trap ID: OL 94468
Trap A B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average _____

Chain of Custody

Relinquished by Tech: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry

For Analysis contact us:

Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon - Refer to MSDS
Deactivated glass and glass wool





Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP #1 R-1

Boiler ID: _____ Trap ID: OL 94921
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time :)	Leak Check Pass/Fail	Test End (Date/Time)	Leak Check Pass/Fail
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Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average						
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Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

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 Impregnated Activated Carbon - Refer to MSDS
 Deactivated glass and glass wool

Best Before: June 2015



Sorbent Trap Chain of Custody

Plant/Source: Welman Test Location: ESP #1 R-2

Boiler ID: _____ Trap ID: OL 94194
Trap A B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

- COIL
- AGS
- 240 mm
- 300 mm
- 185 mm
- 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time :)	Leak Check Pass/Fail	Test End (Date/Time)	Leak Check Pass/Fail
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Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
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Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

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 Impregnated Activated Carbon – Refer to MSDS
 Deactivated glass and glass wool

Best Before: June 2013



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP # 1 R-2

Boiler ID: _____ Trap ID: OL 94388
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time :)	Leak Check Pass/Fail	Test End (Date/Time)	Leak Check Pass/Fail
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Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
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Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
 For Analysis contact us:
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Impregnated Activated Carbon - Refer to MSDS
 Deactivated glass and glass wool

Best Before: June 2013



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP #1 R-3

Boiler ID: _____ Trap ID: OL 94345
Trap A B (Circle One)

Unspiked Spiked At: _____
Certified Accuracy \pm 10%, Traceable to NIST

QA/QC Signature (Trap Maker) [Signature]

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time :) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average _____

Chain of Custody

Relinquished by Tech.: _____ Date: _____

Received by: _____ Date: _____

Relinquished by: _____ Date: _____

Received for Laboratory by: _____ Date: _____

Keep Dry

For Analysis contact us:

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Impregnated Activated Carbon - Refer to MSDS
Deactivated glass and glass wool

Best Before June 2003



Sorbent Trap Chain of Custody

Plant/Source: Caloman Test Location: ESP # 1 R-3

Boiler ID: _____ Trap ID: OL 94232
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average _____

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
For Analysis contact us:
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Impregnated Activated Carbon - Refer to MSDS
Deactivated glass and glass wool

Best Before: June 2013



Sorbent Trap Chain of Custody

Plant/Source: Caterman Test Location: ESP #2 R-1

Boiler ID: _____ Trap ID: OL 94275
 Trap A B (Circle One)

Unspiked Spiked At: _____
Certified Accuracy ± 10%, Traceable to NIST

QA/QC Signature (Trap Maker) *[Signature]*

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry

For Analysis contact us:

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Impregnated Activated Carbon - Refer to MSDS
 Deactivated glass and glass wool





Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP #2 R-1

Boiler ID: _____ Trap ID: OL 94379
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Tracable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

- COIL 240 mm
- AGS 300 mm
- 185 mm 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time :)	Leak Check Pass/Fail	Test End (Date/Time)	Leak Check Pass/Fail
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Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average						
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Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry

For Analysis contact us:

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Impregnated Activated Carbon – Refer to MSDS
Deactivated glass and glass wool

Rev. 01/03



Sorbent Trap Chain of Custody

Plant/Source: Wleman Test Location: ESP # 2 R-2

Boiler ID: _____ Trap ID: OL 94348
Trap A B (Circle One)

Unspiked Spiked At: _____
Certified Accuracy ± 10%, Traceable to NIST

QA/QC Signature (Trap Maker) [Signature]

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time :) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average _____

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
For Analysis contact us:
Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611
Impregnated Activated Carbon – Refer to MSDS
Deactivated glass and glass wool

Best Before: June 2013



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP # 2 R-2

Boiler ID: _____ Trap ID: OL 94374
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time :)	Leak Check Pass/Fail	Test End (Date/Time)	Leak Check Pass/Fail
-----------------------------	-------------------------	-------------------------	-------------------------

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
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Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
 For Analysis contact us:
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 Impregnated Activated Carbon - Refer to MSDS
 Deactivated glass and glass wool





Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP # 2 R-3

Boiler ID: _____ Trap ID: OL 94340
Trap A B (Circle One)

Unspiked Spiked At: _____
Certified Accuracy ± 10%, Traceable to NIST

QA/QC Signature (Trap Maker) [Signature]

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time :) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
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Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry

For Analysis contact us:

Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA

Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon – Refer to MSDS
Deactivated glass and glass wool





Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESPT 2 R-3

Boiler ID: _____ Trap ID: OL 94377
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

- COIL 240 mm
- AGS 300 mm
- 185 mm 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time :)	Leak Check Pass/Fail	Test End (Date/Time)	Leak Check Pass/Fail
-----------------------------	-------------------------	-------------------------	-------------------------

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
 For Analysis contact us:
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 Phone 330-495-0837 Fax 330-405-0847 US Toll Free: 888-876-2611
 Impregnated Activated Carbon – Refer to MSDS
 Deactivated glass and glass wool

Rev. 1/2003



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP # R-1

Boiler ID: _____ Trap ID: OL 94463
Trap A B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time :) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry

For Analysis contact us:

Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA

Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon - Refer to MSDS
Deactivated glass and glass wool



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESPA # 3 R-1

Boiler ID: _____ Trap ID: OL 94423
 Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

- | | |
|---------------------------------|--|
| <input type="checkbox"/> COIL | <input type="checkbox"/> 240 mm |
| <input type="checkbox"/> AGS | <input checked="" type="checkbox"/> 300 mm |
| <input type="checkbox"/> 185 mm | <input type="checkbox"/> 450 mm |

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time :)	Leak Check Pass/Fail:	Test End (Date/Time)	Leak Check Pass/Fail
-----------------------------	--------------------------	-------------------------	-------------------------

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
 For Analysis contact us:
 Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
 Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611
Impregnated Activated Carbon – Refer to MSDS
 Deactivated glass and glass wool

REV. 12/03/03



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP #3 R-2

Boiler ID: _____ Trap ID: OL 94330
Trap A B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time :) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
---------------	--	--	--	--	--	--	--

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

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Impregnated Activated Carbon - Refer to MSDS

Deactivated glass and glass wool



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP #3 R-2

Boiler ID: _____ Trap ID: OL 94362
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time :)	Leak Check Pass/Fail	Test End (Date/Time)	Leak Check Pass/Fail
-----------------------------	-------------------------	-------------------------	-------------------------

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
---------------	--	--	--	--	--	--	--

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
 For Analysis contact us:
 Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
 Phone 330-405-0637 Fax 330-405-0847 US Toll Free: 888-876-2611
 Impregnated Activated Carbon - Refer to MSDS
 Deactivated glass and glass wool





Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP #3 R-3

Boiler ID: _____ Trap ID: OL 94333
Trap A B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) _____
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

COIL 240 mm
 AGS 300 mm
185 mm 450 mm

Sampled By: _____ Type of Trap: Speciation

Test Start (Date/Time :) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
---------------	--	--	--	--	--	--	--

Chain of Custody

Relinquished by Tech.: _____	Date: _____
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Ohio Lumex, Inc. 2003

Keep Dry

For Analysis contact us:

Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA

Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon – Refer to MSDS

Deactivated glass and glass wool



Sorbent Trap Chain of Custody

Plant/Source: Coleman Test Location: ESP # 3 R-3

Boiler ID: _____ Trap ID: OL 94385
Trap A B (Circle One)

Unspiked Spiked At: 175 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

COIL 240 mm
 AGS 300 mm
 185 mm 450 mm

Sampled By: _____ Type of Trap: 30B

Test Start (Date/Time) _____ Leak Check Pass/Fail _____ Test End (Date/Time) _____ Leak Check Pass/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
---------------	--	--	--	--	--	--	--

Chain of Custody

Relinquished by Tech.:	_____	Date:	_____
Received by:	_____	Date:	_____
Relinquished by:	_____	Date:	_____
Received for Laboratory by:	_____	Date:	_____

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 For Analysis contact us:
 Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
 Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611
 Impregnated Activated Carbon – Refer to MSDS
 Deactivated glass and glass wool

Best Before: June 2013



Sorbent Trap Chain of Custody

Plant/Source: Wke Coleman Station Test Location: Stack outlet R-1

Boiler ID: Stack Outlet Trap ID: OL 95013
Trap A B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

Sampled By: CS Type of Trap: Speciation

Test Start 16-00 Leak Check Pass Test End 17-30 Leak Check Pass
(Date/Time) 7-12-11 (Date/Time) 7-12-11

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech.: [Signature] Date: 7-12-11

Received by: _____ Date: _____

Relinquished by: _____ Date: _____

Received for Laboratory by: _____ Date: _____

Keep Dry

Best Before: June 2013

For Analysis contact us:

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Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon – Refer to MSDS
Deactivated glass and glass wool



Sorbent Trap Chain of Custody

Plant/Source: wke Colman station Test Location: stack outlet R-1

Boiler ID: _____ Trap ID: OL 88254
Trap A B (Circle One)

Unspiked Spiked At: 50 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

Sampled By: C.S. Type of Trap: 206

Test Start 16:00 Leak Check Test End 17:30 Leak Check
(Date/Time: 7-12-11) (Pass/Fail) (Date/Time) 7-12-11 (Pass/Fail)

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech.: <u>[Signature]</u>	Date: <u>7-12-11</u>
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

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 For Analysis contact us:
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 Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Best Before: June 2013

Impregnated Activated Carbon - Refer to MSDS
Deactivated glass and glass wool



Sorbent Trap Chain of Custody

Plant/Source: White Coleman station Test Location: stack outlet R-2

Boiler ID: _____ Trap ID: OL 94309
Trap (A) B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

Sampled By: C.S. Type of Trap: Speciation

Test Start 6:47 Leak Check _____ Test End 8:17 Leak Check _____
(Date/Time:) 7-13-11 Pass/Fail (Date/Time) 7-13-11 Pass/Fail

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech.: <u>[Signature]</u>	Date: <u>7-13-11</u>
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
 For Analysis contact us:
 Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
 Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon – Refer to MSDS
 Deactivated glass and glass wool





Sorbent Trap Chain of Custody

Plant/Source: W Ke Coleman Station Test Location: Stack outlet R-7

Boiler ID: _____ Trap ID: OL 88255
Trap A B (Circle One)

Unspiked Spiked At: 50 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

Sampled By: C.S. Type of Trap: 30B

Test Start 6:47 Leak Check Pass/Fail Test End 8:17 Leak Check Pass/Fail
(Date/Time :) 7-13-11 (Date/Time) 7-13-11

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech: [Signature] Date: 7-13-11

Received by: _____ Date: _____

Relinquished by: _____ Date: _____

Received for Laboratory by: _____ Date: _____

Keep Dry

For Analysis contact us:

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Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon – Refer to MSDS
Deactivated glass and glass wool

Best Before: June 2013



Sorbent Trap Chain of Custody

Plant/Source: Ke Coleman Test Location: Stack at R-3

Boiler ID: _____ Trap ID: OL 94337
Trap (A) B (Circle One)

Unspiked Spiked At: _____ QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy ± 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) _____

- COIL
- AGS
- 240 mm
- 300 mm
- 185 mm
- 450 mm

Sampled By: C-S Type of Trap: Speciation

Test Start 8:50 Leak Check _____ Test End 10:20 Leak Check _____
(Date/Time) 7-13-11 Pass/Fail _____ (Date/Time) 7-13-11 (Pass)/Fail _____

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled

Total/Average							
---------------	--	--	--	--	--	--	--

Chain of Custody

Relinquished by Tech.: <u>[Signature]</u>	Date: <u>7-13-11</u>
Received by: _____	Date: _____
Relinquished by: _____	Date: _____
Received for Laboratory by: _____	Date: _____

Keep Dry
 For Analysis contact us:
 Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
 Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon - Refer to MSDS
 Deactivated glass and glass wool





Sorbent Trap Chain of Custody

Plant/Source: Wke Cedar Station Test Location: S-10 K with R-3

Boiler ID: _____ Trap ID: OL 87330
Trap A B (Circle One)

Unspiked Spiked At: 50 ng QA/QC Signature (Trap Maker) [Signature]
Certified Accuracy = 10%, Traceable to NIST

Estimated Hg in Section 1: _____ ng QA/QC Signature (Spiker) [Signature]

Sampled By: [Signature] Type of Trap: 306

Test Start 8:50 Leak Check _____ Test End 10:30 Leak Check _____
(Date/Time) 7-13-11 Pass/Fail (Date/Time) 7-13-11 Pass/Fail

- COIL
- AGS
- 185 mm
- 240 mm
- 300 mm
- 450 mm

Date	Time	Duct Temp (°F or °C)	Sorbent Trap Temp (°F or °C)	Flow Rate (cc/min)	Dry Gas Meter Liters Initial	Dry Gas Meter Liters Final	Total Volume Pulled
Total/Average							

Chain of Custody

Relinquished by Tech.: [Signature] Date: 7-13-11

Received by: _____ Date: _____

Relinquished by: _____ Date: _____

Received for Laboratory by: _____ Date: _____

Keep Dry

For Analysis contact us:

Ohio Lumex Co., Inc. 9263 Ravenna Road Unit A-3, Twinsburg, OH 44087 USA
Phone 330-405-0837 Fax 330-405-0847 US Toll Free: 888-876-2611

Impregnated Activated Carbon - Refer to MSDS
Deactivated glass and glass wool

Best Before: June 2013



G and C COAL ANALYSIS LAB., INC.

1341 HOFFMAN HOLLOW RD.
SUMMERSVILLE, PA 15864
(814) 849-2559
FAX (814) 849-8878

RECEIVED FROM:

Airtech Enviromental
601A Country Club Drive

Bensonville, IL

60106

893129

LAB NO.

SAMPLED 07/08/11

RECEIVED 08/01/11

REPORTED 08/05/11

SAMPLE MARKED:

PROJECT #3648
BIG RIVERS ELECTRIC
PLANT:COLEMAN STATION
COAL-R1-5B/202

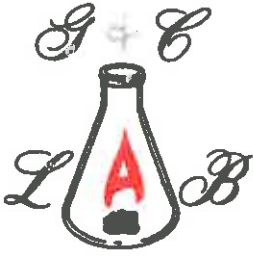
ANALYSIS REPORT

	AS RECEIVED	DRY BASIS
% Moisture.....	11.96	
% Ash	8.91	10.12
% Sulfur.....	2.58	2.93
B.T.U.....	11,470	13,028
BTU (Moisture-ash free).....		14,495
% Volatile Matter.....	36.14	41.05
% Fixed Carbon.....	42.99	48.83
2.25 Lbs. Sul./mil. BTU		
7.77 Lbs. Ash./mil. BTU		

THE ABOVE ANALYTICAL RESULTS WERE
OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road

Summerville, Pa 15864

814-849-2559

Fax: 814-849-8878

Received From:

G&C Lab#: 893129

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/08/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/05/11

Sample Marked:
PROJECT #3648
PLANT:COLEMAN STATION
COAL-R1-5B/202

BIG RIVERS ELECTRIC

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

	As Received	Dry Basis
--	-------------	-----------

% CARBON	64.37	73.11
% HYDROGEN	4.31	4.90
% NITROGEN	1.39	1.58
% Oxygen	8.13	9.09
(by Difference)		
% Ash	8.91	10.12
% Sulfur	2.58	2.93
% Total Moisture	11.96	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



G and C COAL ANALYSIS LAB., INC.

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SUMMERSVILLE, PA 15864
(814) 849-2559
FAX (814) 849-8878

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601A Country Club Drive

Bensonville, IL

60106

893124

LAB NO.

SAMPLED 07/12/11

RECEIVED 08/01/11

REPORTED 08/05/11

SAMPLE MARKED:

PROJECT #3648
BIG RIVERS ELECTRIC
PLANT:COLEMAN STATION
COAL-R2-B5/202

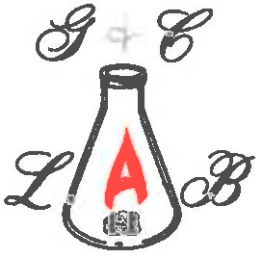
ANALYSIS REPORT

	AS RECEIVED	DRY BASIS
% Moisture.....	11.17	
% Ash	11.06	12.45
% Sulfur.....	4.09	4.60
B.T.U.....	11,265	12,681
BTU (Moisture-ash free).....		14,484
% Volatile Matter.....	35.10	39.51
% Fixed Carbon.....	42.67	48.04
3.63 Lbs. Sul./mil. BTU		
9.82 Lbs. Ash./mil. BTU		

THE ABOVE ANALYTICAL RESULTS WERE
OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

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Summerville, Pa 15864

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Fax: 814-849-8878

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G&C Lab#: 893124

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/12/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/05/11

Sample Marked:
PROJECT #3648
PLANT:COLEMAN STATION
COAL-R2-B5/202

BIG RIVERS ELECTRIC

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

As Received Dry Basis

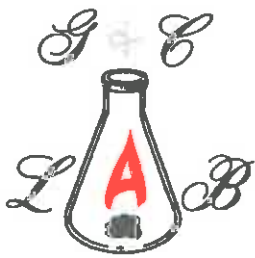
% CARBON	63.28	71.24
% HYDROGEN	4.42	4.98
% NITROGEN	1.35	1.52
% Oxygen	6.28	6.94
(by Difference)		
% Ash	11.06	12.45
% Sulfur	4.09	4.60
% Total Moisture	11.17	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



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Bensonville, IL

60106

893131

LAB NO.

SAMPLED 07/12/11

RECEIVED 08/01/11

REPORTED 08/05/11

SAMPLE MARKED:

PROJECT #3648
BIG RIVERS ELECTRIC
PLANT:COLEMAN STATION
COAL-R3-5B/202

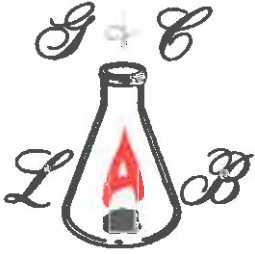
ANALYSIS REPORT

	AS RECEIVED	DRY BASIS
% Moisture.....	11.90	
% Ash	8.71	9.89
% Sulfur.....	2.74	3.11
B.T.U.....	11,523	13,080
BTU (Moisture-ash free).....		14,516
% Volatile Matter.....	36.45	41.37
% Fixed Carbon.....	42.94	48.74
2.38 Lbs. Sul./mil. BTU		
7.56 Lbs. Ash./mil. BTU		

THE ABOVE ANALYTICAL RESULTS WERE
OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road

Summerville, Pa 15864

814-849-2559

Fax: 814-849-8878

Received From:

G&C Lab#: 893131

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/12/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/05/11

Sample Marked:
PROJECT #3648
PLANT:COLEMAN STATION
COAL-R3-5B/202

BIG RIVERS ELECTRIC

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

	As Received	Dry Basis
	-----	-----

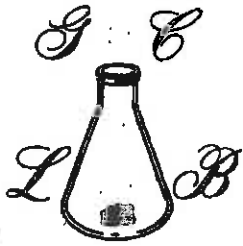
% CARBON	64.74	73.48
% HYDROGEN	4.37	4.96
% NITROGEN	1.37	1.56
% Oxygen	7.82	8.73
(by Difference)		
% Ash	8.71	9.89
% Sulfur	2.74	3.11
% Total Moisture	11.90	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



G and C COAL ANALYSIS LAB., INC.

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SUMMERVILLE, PA 15864
(814) 849-2559
FAX (814) 849-8878

RECEIVED FROM:

Airtech Enviromental
601A Country Club Drive

Bensonville, IL

60106

893127

LAB NO.

SAMPLED 07/07/11

RECEIVED 08/01/11

REPORTED 08/22/11

SAMPLE MARKED:

PROJECT #3648
BIG RIVERS ELECTRIC
PLANT:COLEMAN STATION
COAL-R1-26A/29

CHLORINE 928 MG/KG DRY (USGS BULLETIN 1823)
FLUORINE 73 MG/KG DRY (ASTM 3761)

ANALYSIS REPORT

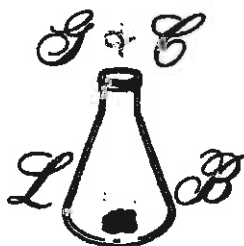
	AS RECEIVED	DRY BASIS
% Moisture.....	12.19	
% Ash	7.86	8.95
% Sulfur.....	2.66	3.03
B.T.U.....	11,552	13,156
BTU (Moisture-ash free).....		14,449
% Volatile Matter.....	36.54	41.61
% Fixed Carbon.....	43.41	49.44

2.30 Lbs. Sul./mil. BTU
6.80 Lbs. Ash./mil. BTU

THE ABOVE ANALYTICAL RESULTS WERE
OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

Francis
G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road

Summerville, Pa 15864

814-849-2559

Fax: 814-849-8878

Received From:

G&C Lab#: 893127

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/07/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/22/11

Sample Marked:
PROJECT #3648
PLANT: COLEMAN STATION
COAL-R1-26A/29

BIG RIVERS ELECTRIC

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

As Received Dry Basis

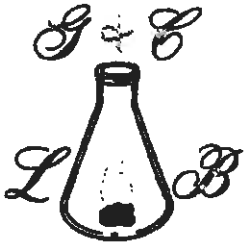
% CARBON	64.89	73.90
% HYDROGEN	4.41	5.02
% NITROGEN	1.40	1.59
% Oxygen	8.24	9.24
(by Difference)		
% Ash	7.86	8.95
% Sulfur	2.66	3.03
% Total Moisture	12.19	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road
Summerville, Pa 15864
814-849-2559
Fax: 814-849-8878

Received From:

G&C Lab#: 893127

AIRTECH ENVIROMENTAL
601A COUNTRY CLUB DRIVE

Date Sampled: 07/07/11

Date Received: 08/01/11

BENSONVILLE, IL

60106

Date Reported: 08/22/11

Sample Marked:

PROJECT #3648

BIG RIVERS ELECTRIC

PLANT: COLEMAN STATION

COAL-R1-26A/29

CHLORINE 928 MG/KG DRY (USGS BULLETIN 1823)

FLUORINE 73 MG/KG DRY (ASTM 3761)

% Total Moisture 12.19

% Ash Dry 8.95

% Ash As Received 7.86

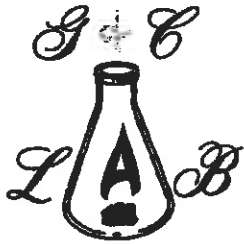
	OF ASH MG/KG	COAL (DRY) MG/KG	COAL (AS REC) MG/KG
Antimony	0.13	0.01	0.01
Arsenic	74.87	6.70	5.88
Beryllium	4.22	0.38	0.33
Cadmium	2.75	0.25	0.22
Chromium	97.20	8.70	7.64
Cobalt	22.72	2.03	1.79
Lead	276.29	24.73	21.72
Manganese	186.80	16.72	14.68
Nickel	93.06	8.33	7.31

Procedure followed using EPA-SW-846, ASTM Method 3030b, 6010b.

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



G and C COAL ANALYSIS LAB., INC.

1341 HOFFMAN HOLLOW RD.
 SUMMERVILLE, PA 15864
 (814) 849-2559
 FAX (814) 849-8878

RECEIVED FROM:

AIRTECH ENVIROMENTAL
 601A COUNTRY CLUB DRIVE

BENSONVILLE, IL

60106

LAB NO. 893122
 SAMPLED 07/08/11
 RECEIVED 08/01/11
 REPORTED 08/26/11

SAMPLE MARKED:

PROJECT #3648
 BIG RIVERS ELECTRIC
 PLANT:COLEMAN STATION
 COAL-R2-26A
 CHLORINE 878 MG/KG DRY (USGS BULLETIN 1823)
 FLUORINE 58 MG/KG DRY (ASTM 3761-96)

ANALYSIS REPORT

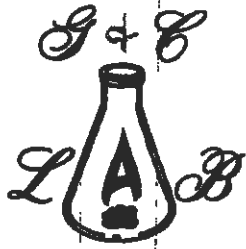
	AS RECEIVED	DRY BASIS
% Moisture.....	12.41	
% Ash	8.24	9.41
% Sulfur.....	2.69	3.07
B.T.U.....	11,521	13,153
BTU (Moisture-ash free).....		14,519
% Volatile Matter.....	36.49	41.66
% Fixed Carbon.....	42.86	48.93

2.33 Lbs. Sul./mil. BTU
 7.15 Lbs. Ash./mil. BTU

G&C COAL ANALYSIS LAB., INC.

THE ABOVE ANALYTICAL RESULTS WERE
 OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY _____


G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road
 Summerville, Pa 15864
 814-849-2559
 Fax: 814-849-8878

RECEIVED FROM:

AIRTECH ENVIRONMENTAL
 601A COUNTRY CLUB DRIVE
 BENSONVILLE, IL 60106

Lab # : 893122
 Date Sampled: 07/08/11
 Date Received: 08/01/11
 Date Reported: 08/24/11

SAMPLE MARKED:

PROJECT #3648
 SAMPLE #COAL-R2-26A
 BIG RIVERS ELECTRIC
 COAL SAMPLE - COLEMAN STATION RUN 2

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS
 As Received** Dry Basis

	As Received**	Dry Basis
% CARBON	64.69	73.85
% HYDROGEN	4.48	5.12
% NITROGEN	1.39	1.59
% OXYGEN (by difference)	6.10	6.96
% ASH	8.24	9.41
% SULFUR	2.69	3.07
% MOISTURE	12.41	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture.

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



G and C COAL ANALYSIS LAB., INC.

1341 HOFFMAN HOLLOW RD.
 SUMMERVILLE, PA 15864
 (814) 849-2559
 FAX (814) 849-8878

RECEIVED FROM:

AIRTECH ENVIROMENTAL
 601A COUNTRY CLUB DRIVE

BENSONVILLE, IL 60106

LAB NO. 893125
 SAMPLED 07/08/11
 RECEIVED 08/01/11
 REPORTED 08/24/11

SAMPLE MARKED:

PROJECT: #3648
 BIG RIVERS ELECTRIC
 PLANT: COLEMAN STATION
 COAL-R3-26A-R2-29

CHLORINE 916 MG/KG DRY (USGS BULLETIN 1823)
 FLUORINE 49 MG/KG DRY (ASTM 3761)

ANALYSIS REPORT

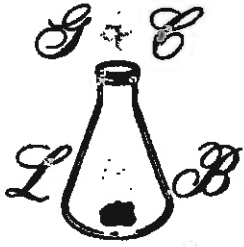
	<u>AS DETERMINED</u>	<u>DRY BASIS</u>
% Moisture.....	13.66	
% Ash	8.12	9.40
% Sulfur.....	2.57	2.98
B.T.U.....	11,347	13,142
BTU (Moisture-ash free).....		14,506
% Volatile Matter.....	35.06	40.61
% Fixed Carbon.....	43.16	49.99

2.26 Lbs. Sul./mil. BTU
 7.16 Lbs. Ash./mil. BTU

G&C COAL ANALYSIS LAB., INC.

THE ABOVE ANALYTICAL RESULTS WERE
 OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY _____


G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road
 Summerville, Pa 15864
 814-849-2559
 Fax: 814-849-8878

Received From:

G&C Lab#: 893125

Airtech Enviromental
 601A Country Club Drive

Date Sampled: 07/08/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/22/11

Sample Marked:
 PROJECT #3648
 PLANT: COLEMAN STATION
 COAL-R3-26A-R2-29

BIG RIVERS ELECTRIC

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS
 As Received Dry Basis
 ----- -----

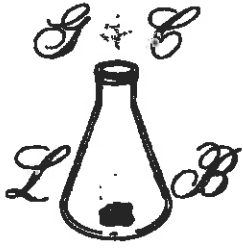
% CARBON	63.59	73.65
% HYDROGEN	4.40	5.10
% NITROGEN	1.36	1.58
% Oxygen	7.95	9.02
(by Difference)		
% Ash	8.12	9.40
% Sulfur	2.57	2.98
% Total Moisture	13.66	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road
Summerville, Pa 15864
814-849-2559
Fax: 814-849-8878

Received From:

G&C Lab#: 893125

AIRTECH ENVIROMENTAL
601A COUNTRY CLUB DRIVE

Date Sampled: 07/08/11

Date Received: 08/01/11

BENSONVILLE, IL

60106

Date Reported: 08/22/11

Sample Marked:

PROJECT #3648

BIG RIVERS ELECTRIC

PLANT: COLEMAN STATION

COAL-R3-26A-R2-29

CHLORINE 916 MG/KG DRY (USGS BULLETIN 1823)

FLUORINE 49 MG/KG DRY (ASTM 3761)

% Total Moisture	13.66
% Ash Dry	9.40
% Ash As Received	8.12

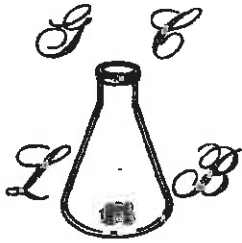
	OF ASH MG/KG	COAL (DRY) MG/KG	COAL (AS REC) MG/KG
Antimony	0.53	0.05	0.04
Arsenic	6.32	0.59	0.51
Beryllium	11.55	1.09	0.94
Cadmium	49.86	4.69	4.05
Chromium	110.13	10.35	8.94
Cobalt	21.59	2.03	1.75
Lead	239.88	22.55	19.48
Manganese	285.65	26.85	23.19
Nickel	82.91	7.79	6.73

Procedure followed using EPA-SW-846, ASTM Method 3030b, 6010b.

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



G and C COAL ANALYSIS LAB., INC.

1341 HOFFMAN HOLLOW RD.
 SUMMERVILLE, PA 15864
 (814) 849-2559
 FAX (814) 849-8878

RECEIVED FROM:

Airtech Enviromental
 601A Country Club Drive

Bensonville, IL

60106

893123

LAB NO.

SAMPLED 07/08/11

RECEIVED 08/01/11

REPORTED 08/22/11

SAMPLE MARKED:

PROJECT #3648
 BIG RIVERS ELECTRIC
 PLANT:COLEMAN STATION
 COAL-R3-29

ANALYSIS REPORT

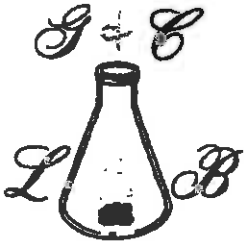
	AS RECEIVED	DRY BASIS
% Moisture.....	12.48	
% Ash	9.20	10.51
% Sulfur.....	2.55	2.91
B.T.U.....	11,386	13,010
BTU (Moisture-ash free).....		14,538
% Volatile Matter.....	35.45	40.51
% Fixed Carbon.....	42.87	48.98

2.24 Lbs. Sul./mil. BTU
 8.08 Lbs. Ash./mil. BTU

THE ABOVE ANALYTICAL RESULTS WERE
 OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road
Summerville, Pa 15864
814-849-2559
Fax: 814-849-8878

Received From:

G&C Lab#: 893123

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/08/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/22/11

Sample Marked:
PROJECT #3648
PLANT:COLEMAN STATION
COAL-R3-29

BIG RIVERS ELECTRIC

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

	As Received	Dry Basis
	-----	-----
% CARBON	63.92	73.04
% HYDROGEN	4.38	5.01
% NITROGEN	1.37	1.56
% Oxygen	7.75	8.70
(by Difference)		
% Ash	9.20	10.51
% Sulfur	2.55	2.91
% Total Moisture	12.48	

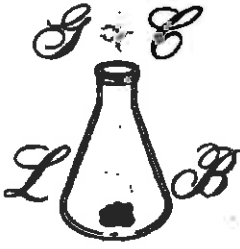
% CARBON	63.92	73.04
% HYDROGEN	4.38	5.01
% NITROGEN	1.37	1.56
% Oxygen	7.75	8.70
(by Difference)		
% Ash	9.20	10.51
% Sulfur	2.55	2.91
% Total Moisture	12.48	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road
Summerville, Pa 15864
814-849-2559
Fax: 814-849-8878

Received From:

G&C Lab#: 893123

AIRTECH ENVIROMENTAL
601A COUNTRY CLUB DRIVE

Date Sampled: 07/08/11

Date Received: 08/01/11

BENSONVILLE, IL

60106

Date Reported: 08/22/11

Sample Marked:
PROJECT #3648
PLANT: COLEMAN STATION
COAL-R3-29

BIG RIVERS ELECTRIC

% Total Moisture 12.48
% Ash Dry 10.51
% Ash As Received 9.20

	OF ASH MG/KG	COAL (DRY) MG/KG	COAL (AS REC) MG/KG
Antimony	0.34	0.04	0.03
Arsenic	60.45	6.35	5.56
Beryllium	8.30	0.87	0.76
Cadmium	8.92	0.94	0.82
Chromium	102.36	10.76	9.42
Cobalt	19.69	2.07	1.81
Lead	175.08	18.40	16.11
Manganese	158.94	16.70	14.62
Nickel	75.94	7.98	6.99

Procedure followed using EPA-SW-846, ASTM Method 3030b, 6010b.

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY



G and C COAL ANALYSIS LAB., INC.

1341 HOFFMAN HOLLOW RD.
SUMMERVILLE, PA 15864
(814) 849-2559
FAX (814) 849-8878

RECEIVED FROM:

Airtech Enviromental
601A Country Club Drive

Bensonville, IL

60106

893130

LAB NO.

SAMPLED 07/12/11

RECEIVED 08/01/11

REPORTED 08/05/11

SAMPLE MARKED:

PROJECT #3648
BIG RIVERS ELECTRIC
PLANT:COLEMAN STATION
COAL-R1-30B
Mercury 0.096 mg/kg or ppm dry (ASTM 6722)

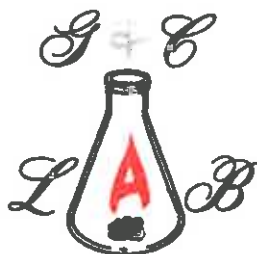
ANALYSIS REPORT

	AS RECEIVED	DRY BASIS
% Moisture.....	12.03	
% Ash	10.64	12.10
% Sulfur.....	2.58	2.93
B.T.U.....	11,193	12,724
BTU (Moisture-ash free).....		14,476
% Volatile Matter.....	34.93	39.71
% Fixed Carbon.....	42.40	48.19
2.31 Lbs. Sul./mil. BTU		
9.51 Lbs. Ash./mil. BTU		

THE ABOVE ANALYTICAL RESULTS WERE
OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road

Summerville, Pa 15864

814-849-2559

Fax: 814-849-8878

Received From:

G&C Lab#: 893130

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/12/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/05/11

Sample Marked:

PROJECT #3648

BIG RIVERS ELECTRIC

PLANT:COLEMAN STATION

COAL-R1-30B

Mercury 0.096 mg/kg or ppm dry (ASTM 6722)

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

As Received Dry Basis

	As Received	Dry Basis
% CARBON	63.00	71.62
% HYDROGEN	4.25	4.83
% NITROGEN	1.35	1.53
% Oxygen	7.80	8.72
(by Difference)		
% Ash	10.64	12.10
% Sulfur	2.58	2.93
% Total Moisture	12.03	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____



G and C COAL ANALYSIS LAB., INC.

1341 HOFFMAN HOLLOW RD.
SUMMERSVILLE, PA 15864
(814) 849-2559
FAX (814) 849-8878

RECEIVED FROM:

Airtech Enviromental
601A Country Club Drive

Bensonville, IL

60106

893128

LAB NO.

SAMPLED 07/13/11

RECEIVED 08/01/11

REPORTED 08/05/11

SAMPLE MARKED:

PROJECT #3648
BIG RIVERS ELECTRIC
PLANT:COLEMAN STATION
COAL-R2-30B
Mercury 0.112 mg/kg dry or ppm dry (ASTM 6722)

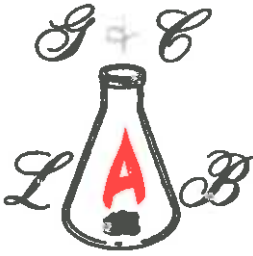
ANALYSIS REPORT

	AS RECEIVED	DRY BASIS
% Moisture.....	15.13	
% Ash	9.29	10.95
% Sulfur.....	2.67	3.15
B.T.U.....	10,911	12,856
BTU (Moisture-ash free).....	14,437	
% Volatile Matter.....	34.19	40.28
% Fixed Carbon.....	41.39	48.77
2.45 Lbs. Sul./mil. BTU		
8.51 Lbs. Ash./mil. BTU		

THE ABOVE ANALYTICAL RESULTS WERE
OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road

Summerville, Pa 15864

814-849-2559

Fax: 814-849-8878

Received From:

G&C Lab#: 893128

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/13/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/05/11

Sample Marked:

PROJECT #3648

BIG RIVERS ELECTRIC

PLANT:COLEMAN STATION

COAL-R2-30B

Mercury 0.112 mg/kg dry or ppm dry (ASTM 6722)

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

As Received Dry Basis

	As Received	Dry Basis
% CARBON	61.32	72.25
% HYDROGEN	4.11	4.84
% NITROGEN	1.32	1.56
% Oxygen	7.81	8.98
(by Difference)		
% Ash	9.29	10.95
% Sulfur	2.67	3.15
% Total Moisture	15.13	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY



G and C COAL ANALYSIS LAB., INC.

1341 HOFFMAN HOLLOW RD.
SUMMERSVILLE, PA 15864
(814) 849-2559
FAX (814) 849-8878

RECEIVED FROM:

Airtech Enviromental
601A Country Club Drive

Bensonville, IL

60106

893126

LAB NO.

SAMPLED 07/13/11

RECEIVED 08/01/11

REPORTED 08/05/11

SAMPLE MARKED:

PROJECT #3648
BIG RIVERS ELECTRIC
PLANT:COLEMAN STATION
COAL-R3-30B
Mercury 0.113 mg/kg dry or ppm dry (ASTM 6722)

ANALYSIS REPORT

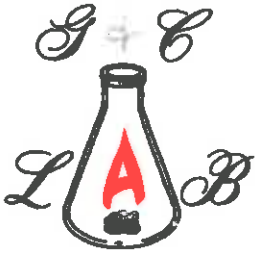
	AS RECEIVED	DRY BASIS
% Moisture.....	13.22	
% Ash	9.66	11.13
% Sulfur.....	2.61	3.01
B.T.U.....	11,195	12,900
BTU (Moisture-ash free).....		14,516
% Volatile Matter.....	34.95	40.28
% Fixed Carbon.....	42.17	48.59

2.33 Lbs. Sul./mil. BTU
8.63 Lbs. Ash./mil. BTU

THE ABOVE ANALYTICAL RESULTS WERE
OBTAINED FOLLOWING ASTM PROCEDURES.

APPROVED BY

G&C COAL ANALYSIS LAB., INC.



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road

Summerville, Pa 15864

814-849-2559

Fax: 814-849-8878

Received From:

G&C Lab#: 893126

Airtech Enviromental
601A Country Club Drive

Date Sampled: 07/13/11

Date Received: 08/01/11

Bensonville, IL

60106

Date Reported: 08/05/11

Sample Marked:

PROJECT #3648

BIG RIVERS ELECTRIC

PLANT:COLEMAN STATION

COAL-R3-30B

Mercury 0.113 mg/kg dry or ppm dry (ASTM 6722)

Procedure used following ASTM Method D-5373-02

ULTIMATE ANALYSIS

As Received Dry Basis

	As Received	Dry Basis
% CARBON	62.91	72.49
% HYDROGEN	4.28	4.93
% NITROGEN	1.33	1.53
% Oxygen	7.64	8.64
(by Difference)		
% Ash	9.66	11.13
% Sulfur	2.61	3.01
% Total Moisture	13.22	

**Hydrogen and Oxygen do not include the Hydrogen and Oxygen from the Moisture

The above analytical results were obtained following ASTM procedures.

G & C COAL ANALYSIS LAB., INC.

APPROVED BY _____

AIRTECH ENVIRONMENTAL SERVICES INC.
Chain of Custody

Project Number		3648	Location		ESP Exhaust Unit 1	Page	1	of	1		
Client		Big Rivers Energy	Date		7/12/2011	Number of Containers					
Plant		Coleman Station	Completed By		James Christ						
The following samples consist of the impinger contents and a 0.1N H ₂ SO ₄ rinse.											
ID No.	Run No.	Date	Sample Description	HCl	HF	Analysis Requested				Notes	
R1-26-IMP	1		Impinger Contents and 0.1N H ₂ SO ₄ Rinse	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					1	
R1-26-IMP	2		Impinger Contents and 0.1N H ₂ SO ₄ Rinse	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					1	
R1-26-IMP	3		Impinger Contents and 0.1N H ₂ SO ₄ Rinse	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					1	
Relinquished By (signature)			Relinquished By (signature)							Carrier	FedEx
(printed)	James Christ		(printed)							Laboratory	Airtech Env.
Date/Time	7/12/11		Date/Time							Contact	Michael Olgetree
Accepted By (signature)			Accepted By (signature)							Address	Denver, CO
(printed)			(printed)							Phone	
Date/Time			Date/Time							Fax	
										Date/Time	



AIRTECH
Environmental
Services Inc.

Airtech Environmental Services Inc.
601A Country Club Drive
Bensenville, IL 60106
Phone: (630) 860-4740, Fax: (630) 860 4745

AIRTECH ENVIRONMENTAL SERVICES INC.
Chain of Custody

COP

Project Number 3648		Location Big Rivers Energy		Common Stack 7/12/2011		Page 1	of 1
Client Big Rivers Energy		Date Completed By Coleman Station		James Christ			
Plant 5 DG TAT							
ID No.	Run No.	Date	Sample Description	Metallic HAPs	Analysis Requested	Number of Containers	Notes
29-R1-HNO	1		FH Rinse of 0.1N HNO ₃	X		2	
29-R2-HNO	2		FH Rinse of 0.1N HNO ₃	X		2	
29-R3-HNO	3		FH Rinse of 0.1N HNO ₃	X		2	
29-R1-FIL	1		Quartz Filter	X		1	
29-R2-FIL	2		Quartz Filter	X		1	
29-R3-FIL	3		Quartz Filter	X		1	
29-R1-5%/10%	1		Imp catches and rinses	X		1	
29-R2-5%/10%	2		Imp catches and rinses	X		1	
29-R3-5%/10%	3		Imp catches and rinses	X		1	
29-RB-5%/10%	RB		5% - 10% Metal Absorbing Solvent			1	
29-RB-HNO	RB		0.1N HNO ₃			1	
29-RB-FIL	RB		Quartz Filter	X		1	
29-RB-TR	RB		FELON Filter	X		1	
Relinquished By (signature) (printed)			Relinquished By (signature) (printed)	David Devries		Carrier Laboratory	
Date/Time			Date/Time	7-26-11 3:24		Contact Address	
Accepted By (signature) (printed)			Accepted By (signature) (printed)	David Devries		Phone Fax	
Date/Time			Date/Time	7-26-11 15:24		Date/Time	



Airtech Environmental Services Inc.
601A Country Club Drive
Bensenville, IL 60106
Phone: (630) 860-4740, Fax: (630) 860 4745

AIRTECH ENVIRONMENTAL SERVICES INC.
Chain of Custody

COPY

Project Number: 3648		Location: ESP Exhaust Unit 1		Page: 1 of 1	
Client: Big Rivers Energy		Date:		Analysis Requested	
Plant: Coleman Station		Completed By: James Christ			
<p><i>Copy TAT</i></p>					
ID No.	Run No.	Date	Sample Description	Number of Containers	Notes
29-R1-HNO	1		FH Rinse of 0.1N HNO ₃	6	
29-R2-HNO	2		FH Rinse of 0.1N HNO ₃	4	
29-R3-HNO	3		FH Rinse of 0.1N HNO ₃	2	
29-R1-FIL	1		Quartz Filter	1	
29-R2-FIL	2		Quartz Filter	1	
29-R3-FIL	3		Quartz Filter	1	
29-R1-5%/10%	1		Imp catches and rinses	1	
29-R2-5%/10%	2		Imp catches and rinses	1	
29-R3-5%/10%	3		Imp catches and rinses	1	
Metallic HAPs					
Relinquished By (signature): <i>[Signature]</i>			Relinquished By (signature): <i>[Signature]</i>		
Date/Time: <i>[Signature]</i>			Date/Time: 7-26-11 3:24		
Accepted By (signature): <i>[Signature]</i>			Accepted By (signature): <i>[Signature]</i>		
Date/Time: 7-28-11			Date/Time: 7/26/11 1524		
Carrier:		Laboratory:			
Contact:		Address:			
Phone:		Fax:			
Date/Time:		Date/Time:			



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Airtech Environmental Services Inc.
601A Country Club Drive
Bensenville, IL 60106
Phone: (630) 860-4740, Fax: (630) 860 4745

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Project Number 3648		Location ESP Exhaust Unit 2		Page 1 of 1	
Client Big Rivers Energy		Date		Analysis Requested	
Plant Coleman Station		Completed By James Christ		Number of Containers	
<p style="font-size: 1.5em; margin: 0;">5 Day TAT</p>		Metallic HAPs			
ID No.	Run No.	Date	Sample Description		Notes
29-R1-HNO	1		FH Rinse of 0.1N HNO ₃	x	
29-R2-HNO	2		FH Rinse of 0.1N HNO ₃	x	
29-R3-HNO	3		FH Rinse of 0.1N HNO ₃	x	
29-R1-FIL	1		Quartz Filter	x	
29-R2-FIL	2		Quartz Filter	x	
29-R3-FIL	3		Quartz Filter	x	
29-R1-5%/10%	1		Imp catches and rinses	x	
29-R2-5%/10%	2		Imp catches and rinses	x	
29-R3-5%/10%	3		Imp catches and rinses	x	
Relinquished By (signature) <i>[Signature]</i>		Relinquished By (signature) <i>[Signature]</i>		Carrier	
Date/Time <i>[Signature]</i>		Date/Time 7-20-11 5:34		Laboratory	
Accepted By (signature) <i>[Signature]</i>		Accepted By (signature) <i>[Signature]</i>		Contact	
Date/Time 7-25-11		Date/Time 7/26/11 15:24		Address	
				Phone	
				Fax	
				Date/Time	



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Environmental
Services Inc.

Airtech Environmental Services Inc.
601A County Club Drive
Bensenville, IL 60106
Phone: (630) 860-4740, Fax: (630) 860 4745

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Project Number 3648		Location ESP Exhaust Unit 3	
Client Big Rivers Energy		Date	
Plant Coleman Station		Completed By James Christ	

5 Day TAT

ID No.	Run No.	Date	Sample Description	Metallic HAPs	Analysis Requested				Number of Containers	Notes
29-R1-HNO	1		FH Rinse of 0.1N HNO ₃	X						
29-R2-HNO	2		FH Rinse of 0.1N HNO ₃	X						
29-R3-HNO	3		FH Rinse of 0.1N HNO ₃	X						
29-R1-FIL	1		Quartz Filter	X						
29-R2-FIL	2		Quartz Filter	X						
29-R3-FIL	3		Quartz Filter	X						
29-R1-5%/10%	1		Imp catches and rinses	X						
29-R2-5%/10%	2		Imp catches and rinses	X						
29-R3-5%/10%	3		Imp catches and rinses	X						

Relinquished By (signature) <i>[Signature]</i>	Relinquished By (signature) <i>[Signature]</i>	Carrier Laboratory	
(printed) 	(printed) DAVID DENEGES	Contact Address	Phone Fax Date/Time
Date/Time 	Date/Time 7-26-11 5:34		
Accepted By (signature) <i>[Signature]</i>	Accepted By (signature) <i>[Signature]</i>		
(printed) DAVID DENEGES	(printed) DAVID DENEGES		
Date/Time 	Date/Time 7-25-11		



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Services Inc.

Airtech Environmental Services Inc.
601A Country Club Drive
Bensenville, IL 60106
Phone: (630) 860-4740, Fax: (630) 860 4745

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Project Number		3648		Location		Unit 1, 2, 3		Page		1 of 1	
Client		Big Rivers		Date							
Plant		Hawesville, KY		Completed By							
Fuel Samples											
ID No.	Run No.	Date	Sample Description	Ultimate Analysis	Chlorine	Fluorine	Analysis Requested	Number of Containers	Notes		
Coal - 26A - 3648	1	7/7/2011	7-7-11 10 AM	X	X	X	HAP Metals	1			
Coal - 26A - 3648	2	7/8/2011	7-8-11 8 AM	X	X	X	HAP Metals	1			
Coal - 26A - 3648	3	7/8/2011	7-8-11 3 PM	X	X	X	HAP Metals	1			
Coal - 29 - 3648	1	7/7/2011	Sample is 26A-3648	X	X	X	HAP Metals	1	Same sample as 26A-3648		
Coal - 29 - 3648	2	7/8/2011	7-7-11 1 PM	X	X	X	HAP Metals	1			
Coal - 29 - 3648	3	7/8/2011	Sample is 26A-3648	X	X	X	HAP Metals	1	Same sample as 26A-3648		
Coal - 5B/202 - 3648	1	7/8/2011	7-8-11 11:30 AM	X	X	X	HAP Metals	1			
Coal - 5B/202 - 3649	2	7/12/2011	7-12-11 11 AM	X	X	X	HAP Metals	1			
Coal - 5B/202 - 3650	3	7/12/2011	7-12-11 2 PM	X	X	X	HAP Metals	1			
Coal - 30B - 3648	1	7/12/2011	7-12-11 5 PM	X	X	X	HAP Metals	1			
Coal - 30B - 3649	2	7/13/2011	7-13-11 8:50 AM	X	X	X	HAP Metals	1			
Coal - 30B - 3650	3	7/13/2011	7-13-11 11 AM	X	X	X	HAP Metals	1			
Relinquished By (signature)		[Signature]		Relinquished By (signature)				Carrier		Van	
Relinquished By (printed)		M. Chisel Galbraith		Relinquished By (printed)				Laboratory		Test America	
Date/Time		7-15-11		Date/Time				Contact		Kevin Woodcock	
Accepted By (signature)		[Signature]		Accepted By (signature)				Address		5815 Middlebrook Pike	
Accepted By (printed)		Jim Christ		Accepted By (printed)				Phone		Knoxville, TN 37921	
Date/Time		7/15/11		Date/Time				Fax		(865) 291-3082	



AIRTECH
Environmental
Services Inc.

Airtech Environmental Services Inc.
601A Country Club Drive
Bensenville, IL 60106
Phone: (630) 860-4740, Fax: (630) 860 4745