

DATE & TIME	8/9/2016 11:54:59 AM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.230	MODE	CHN

SIGNALS

		ZR	26642
CARBON	0.999%	NR	26648
HYDROGEN	10.680%	CR	28694
NITROGEN	-118%	HR	28683
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	8/9/2016 12:01:16 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.470	MODE	CHN

SIGNALS

		ZR	26661
CARBON	1.002%	NR	26681
HYDROGEN	10.644%	CR	26740
NITROGEN	1.101%	HR	26666
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	1	2	1
FILL TIME	35 Seconds		

DATE & TIME	8/9/2016 12:31:15 PM	P_ID	080916AR
SAMPLE ID	162354618	USER ID	alpha
WEIGHT (mg)	11.440	MODE	CHN

SIGNALS

		ZR	26654
CARBON	6.450%	NR	26916
HYDROGEN	6.918%	CR	40191
NITROGEN	2.167%	HR	40160
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	1	2	1
FILL TIME	28 Seconds		

DATE & TIME	8/9/2016 12:36:06 PM	P_ID	080916AR
SAMPLE ID	162354618	USER ID	alpha
WEIGHT (mg)	11.620	MODE	CHN

SIGNALS

		ZR	26640
CARBON	6.456%	NR	26932
HYDROGEN	8.287%	CR	41717
NITROGEN	2.188%	HR	41699

BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 2 1 1  
 FILL TIME 28 Seconds

DATE & TIME 8/9/2016 12:40:53 PM P\_ID 080916AR  
 SAMPLE ID 162354607 USER ID alpha  
 WEIGHT (mg) 7.120 MODE CHN

SIGNALS

ZR 26649  
 NR 26874  
 CR 36990  
 HR 36957  
 CARBON 7.201%  
 HYDROGEN 9.623%  
 NITROGEN 2.694%  
 BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 37 Seconds

DATE & TIME 8/9/2016 12:46:00 PM P\_ID 080916AR  
 SAMPLE ID 162354607 USER ID alpha  
 WEIGHT (mg) 9.750 MODE CHN

SIGNALS

ZR 26646  
 NR 26941  
 CR 41263  
 HR 41223  
 CARBON 7.453%  
 HYDROGEN 5.698%  
 NITROGEN 2.636%  
 BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 36 Seconds

DATE & TIME 8/9/2016 12:51:14 PM P\_ID 080916AR  
 SAMPLE ID 162354604 USER ID alpha  
 WEIGHT (mg) 11.660 MODE CHN

SIGNALS

ZR 26643  
 NR 26711  
 CR 29637  
 HR 29571  
 CARBON 1.261%  
 HYDROGEN 0.635%  
 NITROGEN 0.391%  
 BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 2 1 1  
 FILL TIME 36 Seconds

DATE & TIME 8/9/2016 12:55:46 PM P\_ID 080916AR  
 SAMPLE ID 162354604 USER ID alpha  
 WEIGHT (mg) 10.810 MODE CHN

				SIGNALS
				ZR 26662
CARBON	1.714%			NR 26721
HYDROGEN	2.912%			CR 30400
NITROGEN	0.345%			HR 30347
BLANKS	36	-70	19	
K FACTORS	19.660	0.054	1.074	
FILL	COMB	BOOST1	BOOST2	
	1	1	1	
FILL TIME	33 Seconds			

DATE & TIME	8/9/2016 1:00:31 PM	P_ID	080916AR
SAMPLE ID	162354603	USER ID	alpha
WEIGHT (mg)	11.660	MODE	CHN

				SIGNALS
				ZR 26664
CARBON	1.962%			NR 26767
HYDROGEN	2.541%			CR 31300
NITROGEN	0.671%			HR 31246
BLANKS	36	-70	19	
K FACTORS	19.660	0.054	1.074	
FILL	COMB	BOOST1	BOOST2	
	1	2	1	
FILL TIME	31 Seconds			

DATE & TIME	8/9/2016 1:05:23 PM	P_ID	080916AR
SAMPLE ID	162354603	USER ID	alpha
WEIGHT (mg)	11.660	MODE	CHN

				SIGNALS
				ZR 26650
CARBON	1.949%			NR 26766
HYDROGEN	3.980%			CR 32526
NITROGEN	0.732%			HR 32488
BLANKS	36	-70	19	
K FACTORS	19.660	0.054	1.074	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	30 Seconds			

DATE & TIME	8/9/2016 1:10:11 PM	P_ID	080916AR
SAMPLE ID	162354602	USER ID	alpha
WEIGHT (mg)	17.250	MODE	CHN

				SIGNALS
				ZR 26654
CARBON	2.125%			NR 26760
HYDROGEN	3.972%			CR 34003
NITROGEN	0.470%			HR 33970
BLANKS	36	-70	19	
K FACTORS	19.660	0.054	1.074	
FILL	COMB	BOOST1	BOOST2	
	1	2	1	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 1:14:52 PM	P_ID	080916AR
SAMPLE ID	162354602	USER ID	alpha
WEIGHT (mg)	16.380	MODE	CHN

SIGNALS

	ZR	26664	
CARBON	4.487%	NR	26773
HYDROGEN	5.879%	CR	41259
NITROGEN	0.512%	HR	41241
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:23:37 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.330	MODE	CHN

SIGNALS

	ZR	26684	
CARBON	0.989%	NR	26707
HYDROGEN	3.765%	CR	28751
NITROGEN	0.036%	HR	28702
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	37 Seconds		

DATE & TIME	8/9/2016 1:28:39 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	34.930	MODE	CHN

SIGNALS

	ZR	26665	
CARBON	0.003%	NR	26666
HYDROGEN	-0.689%	CR	26720
NITROGEN	-0.048%	HR	26637
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	36 Seconds		

DATE & TIME	8/9/2016 1:38:59 PM	P_ID	080916AR
SAMPLE ID	162354602	USER ID	alpha
WEIGHT (mg)	16.160	MODE	CHN

SIGNALS

	ZR	26685	
CARBON	3.239%	NR	26820
HYDROGEN	2.636%	CR	37148
NITROGEN	0.668%	HR	37101

BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	33 Seconds		

DATE & TIME	8/9/2016 1:43:58 PM	P_ID	080916AR
SAMPLE ID	162354602	USER ID	alpha
WEIGHT (mg)	9.410	MODE	CHN

SIGNALS

		ZR	26676
CARBON	3.444%	NR	26754
HYDROGEN	4.133%	CR	33162
NITROGEN	0.584%	HR	33113
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	32 Seconds		

DATE & TIME	8/9/2016 1:43:58 PM	P_ID	080916AR
SAMPLE ID	162354602	USER ID	alpha
WEIGHT (mg)	9.410	MODE	CHN

SIGNALS

		ZR	26658
CARBON	2.183%	NR	26822
HYDROGEN	3.307%	CR	33108
NITROGEN	0.927%	HR	33064
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 1:53:52 PM	P_ID	080916AR
SAMPLE ID	162354601	USER ID	alpha
WEIGHT (mg)	17.220	MODE	CHN

SIGNALS

		ZR	26655
CARBON	2.425%	NR	26855
HYDROGEN	3.764%	CR	35102
NITROGEN	0.979%	HR	35067
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 1:58:48 PM	P_ID	080916AR
SAMPLE ID	162394201	USER ID	alpha
WEIGHT (mg)	21.900	MODE	CHN

				SIGNALS	
CARBON	0.843%			ZR	26659
HYDROGEN	2.199%			NR	26749
NITROGEN	0.302%			CR	30416
BLANKS	36	-70	19	HR	30372
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
1	2	1	1		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 2:03:28 PM	P_ID	080916AR
SAMPLE ID	162394201	USER ID	alpha
WEIGHT (mg)	11.250	MODE	CHN

				SIGNALS	
CARBON	0.854%			ZR	26654
HYDROGEN	3.786%			NR	26704
NITROGEN	0.257%			CR	28628
BLANKS	36	-70	19	HR	28581
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
1	2	1	1		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 2:05:12 PM	P_ID	080916AR
SAMPLE ID	162394201	USER ID	alpha
WEIGHT (mg)	12.110	MODE	CHN

				SIGNALS	
CARBON	0.004%			ZR	26647
HYDROGEN	0.161%			NR	26651
NITROGEN	-0.15%			CR	26756
BLANKS	36	-70	19	HR	26694
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
1	2	1	1		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 2:13:04 PM	P_ID	080916AR
SAMPLE ID	162394202	USER ID	alpha
WEIGHT (mg)	12.040	MODE	CHN

				SIGNALS	
CARBON	1.967%			ZR	26635
HYDROGEN	4.153%			NR	26731
NITROGEN	0.595%			CR	31422
BLANKS	36	-70	19	HR	31379
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
1	2	1	1		
FILL TIME	30 Seconds				

DATE & TIME	8/9/2016 2:32:57 PM	P_ID	080916AR
SAMPLE ID	162394202	USER ID	alpha
WEIGHT (mg)	12.670	MODE	CHN

SIGNALS

	ZR	26652
CARBON	NR	26745
HYDROGEN	CR	31785
NITROGEN	HR	31724
BLANKS	36	-70 19
K FACTORS	19.660	0.054 1.074
FILL	COMB	BOOST1 BOOST2
	2	1 1
FILL TIME	28 Seconds	

DATE & TIME	8/9/2016 2:37:47 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.640	MODE	CHN

SIGNALS

	ZR	26632
CARBON	NR	26734
HYDROGEN	CR	28730
NITROGEN	HR	28747
BLANKS	36	-70 19
K FACTORS	19.660	0.054 1.074
FILL	COMB	BOOST1 BOOST2
	2	1 1
FILL TIME	28 Seconds	

DATE & TIME	8/9/2016 2:42:30 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.610	MODE	CHN

SIGNALS

	ZR	26618
CARBON	NR	26609
HYDROGEN	CR	26583
NITROGEN	HR	26531
BLANKS	36	-70 19
K FACTORS	19.660	0.054 1.074
FILL	COMB	BOOST1 BOOST2
	2	1 1
FILL TIME	29 Seconds	

DATE & TIME	8/9/2016 2:49:54 PM	P_ID	080916AR
SAMPLE ID	162379105	USER ID	alpha
WEIGHT (mg)	9.590	MODE	CHN

SIGNALS

	ZR	26594
CARBON	NR	26676
HYDROGEN	CR	29178
NITROGEN	HR	29169

BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 28 Seconds

DATE & TIME 8/9/2016 2:54:44 PM P\_ID 080916AR  
 SAMPLE ID 1623799105 USER ID alpha  
 WEIGHT (mg) 13.060 MODE CHN

SIGNALS  
 ZR 26611  
 NR 26737  
 CR 30106  
 HR 30063

CARBON 1.298%  
 HYDROGEN 3.828%  
 NITROGEN 0.763%  
 BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 28 Seconds

DATE & TIME 8/9/2016 2:59:35 PM P\_ID 080916AR  
 SAMPLE ID 162379106 USER ID alpha  
 WEIGHT (mg) 10.020 MODE CHN

SIGNALS  
 ZR 26607  
 NR 26706  
 CR 29342  
 HR 29301

CARBON 1.320%  
 HYDROGEN 5.360%  
 NITROGEN 0.743%  
 BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 3:04:29 PM P\_ID 080916AR  
 SAMPLE ID 162379106 USER ID alpha  
 WEIGHT (mg) 18.020 MODE CHN

SIGNALS  
 ZR 26613  
 NR 26781  
 CR 31629  
 HR 31596

CARBON 1.358%  
 HYDROGEN 3.802%  
 NITROGEN 0.770%  
 BLANKS 36 -70 19  
 K FACTORS 19.660 0.054 1.074  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 3:09:23 PM P\_ID 080916AR  
 SAMPLE ID 162379107 USER ID alpha  
 WEIGHT (mg) 8.520 MODE CHN



				SIGNALS	
CARBON	1.227%			ZR	26631
HYDROGEN	8.477%			NR	26728
NITROGEN	0.852%			CR	28820
BLANKS	36	-70	19	HR	28789
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1	1		
FILL TIME	33 Seconds				

DATE & TIME	8/9/2016 3:14:16 PM	P_ID	080916AR
SAMPLE ID	162379107	USER ID	alpha
WEIGHT (mg)	14.940	MODE	CHN

				SIGNALS	
CARBON	1.237%			ZR	26638
HYDROGEN	1.735%			NR	26792
NITROGEN	0.841%			CR	30461
BLANKS	36	-70	19	HR	30405
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1	1		
FILL TIME	35 Seconds				

DATE & TIME	8/9/2016 3:14:16 PM	P_ID	080916AR
SAMPLE ID	162379107	USER ID	alpha
WEIGHT (mg)	14.940	MODE	CHN

				SIGNALS	
CARBON	-0.14%			ZR	26635
HYDROGEN	1.148%			NR	26635
NITROGEN	-0.78%			CR	26608
BLANKS	36	-70	19	HR	26552
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1	1		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 3:23:56 PM	P_ID	080916AR
SAMPLE ID	162379108	USER ID	alpha
WEIGHT (mg)	11.210	MODE	CHN

				SIGNALS	
CARBON	3.903%			ZR	26634
HYDROGEN	6.773%			NR	26901
NITROGEN	2.060%			CR	35538
BLANKS	36	-70	19	HR	35509
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1	1		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 3:28:49 PM	P_ID	080916AR
SAMPLE ID	162379109	USER ID	alpha
WEIGHT (mg)	11.360	MODE	CHN

SIGNALS

	ZR	26642
	NR	26749
	CR	30348
	HR	30311
CARBON	1.595%	
HYDROGEN	5.379%	
NITROGEN	0.721%	
BLANKS	36	-70 19
K FACTORS	19.660	0.054 1.074
FILL	COMB	BOOST1 BOOST2
	1	2 1 1
FILL TIME	29 Seconds	

DATE & TIME	8/9/2016 3:34:11 PM	P_ID	080916AR
SAMPLE ID	162379109	USER ID	alpha
WEIGHT (mg)	11.740	MODE	CHN

SIGNALS

	ZR	26644
	NR	26831
	CR	33630
	HR	33602
CARBON	1.923%	
HYDROGEN	4.348%	
NITROGEN	0.874%	
BLANKS	36	-70 19
K FACTORS	19.660	0.054 1.074
FILL	COMB	BOOST1 BOOST2
	1	2 1 1
FILL TIME	29 Seconds	

DATE & TIME	8/9/2016 3:52:23 PM	P_ID	080916AR
SAMPLE ID	162379109	USER ID	alpha
WEIGHT (mg)	10.740	MODE	CHN

SIGNALS

	ZR	26659
	NR	26667
	CR	28788
	HR	28805
CARBON	0.987%	
HYDROGEN	15.001%	
NITROGEN	-0.95%	
BLANKS	36	-70 19
K FACTORS	19.660	0.054 1.074
FILL	COMB	BOOST1 BOOST2
	1	2 1 1
FILL TIME	29 Seconds	

DATE & TIME	8/9/2016 4:01:19 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	87.130	MODE	CHN

SIGNALS

	ZR	26635
	NR	26633
	CR	26676
	HR	26624
CARBON	0.0%	
HYDROGEN	0.383%	
NITROGEN	-0.22%	

BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 4:14:27 PM	P_ID	080916AR
SAMPLE ID	162379110	USER ID	alpha
WEIGHT (mg)	13.620	MODE	CHN

SIGNALS

ZR	26633
NR	26778
CR	32000
HR	31963

CARBON	1.645%
HYDROGEN	1.062%
NITROGEN	0.819%
BLANKS	36 -70 19
K FACTORS	19.660 0.054 1.074
FILL	COMB BOOST1 BOOST2
	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/9/2016 4:16:23 PM	P_ID	080916AR
SAMPLE ID	162379110	USER ID	alpha
WEIGHT (mg)	13.620	MODE	CHN

SIGNALS

ZR	26619
NR	26776
CR	31886
HR	31825

CARBON	1.645%
HYDROGEN	1.062%
NITROGEN	0.819%
BLANKS	36 -70 19
K FACTORS	19.660 0.054 1.074
FILL	COMB BOOST1 BOOST2
	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/9/2016 4:24:19 PM	P_ID	080916AR
SAMPLE ID	162379110D	USER ID	alpha
WEIGHT (mg)	10.040	MODE	CHN

SIGNALS

ZR	26620
NR	26719
CR	29789
HR	29723

CARBON	1.537%
HYDROGEN	0.738%
NITROGEN	0.742%
BLANKS	36 -70 19
K FACTORS	19.660 0.054 1.074
FILL	COMB BOOST1 BOOST2
	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/9/2016 4:29:15 PM	P_ID	080916AR
SAMPLE ID	162379110D	USER ID	alpha
WEIGHT (mg)	14.140	MODE	CHN

				SIGNALS	
CARBON	1.925%			ZR	26618
HYDROGEN	1.441%			NR	26758
NITROGEN	0.797%			CR	32144
BLANKS	36	-70	19	HR	32085
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1			
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 4:38:48 PM	P_ID	080916AR
SAMPLE ID	162379110MS	USER ID	alpha
WEIGHT (mg)	12.620	MODE	CHN

				SIGNALS	
CARBON	2.723%			ZR	26627
HYDROGEN	21.466%			NR	26751
NITROGEN	0.899%			CR	32606
BLANKS	36	-70	19	HR	32662
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1			
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 4:38:48 PM	P_ID	080916AR
SAMPLE ID	162379110MS	USER ID	alpha
WEIGHT (mg)	12.620	MODE	CHN

				SIGNALS	
CARBON	3.408%			ZR	26633
HYDROGEN	19.663%			NR	26769
NITROGEN	0.863%			CR	35261
BLANKS	36	-70	19	HR	35325
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1			
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 4:43:38 PM	P_ID	080916AR
SAMPLE ID	162379108	USER ID	alpha
WEIGHT (mg)	20.300	MODE	CHN

				SIGNALS	
CARBON	1.270%			ZR	26627
HYDROGEN	1.642%			NR	26782
NITROGEN	0.624%			CR	31887
BLANKS	36	-70	19	HR	31835
K FACTORS	19.660	0.054	1.074		
FILL	COMB	BOOST1	BOOST2		
	2	1			
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 4:48:32 PM	P_ID	080916AR
SAMPLE ID	162379108	USER ID	alpha
WEIGHT (mg)	10.260	MODE	CHN

SIGNALS

	ZR	26632	
CARBON	1.748%	NR	26714
HYDROGEN	2.166%	CR	30275
NITROGEN	0.572%	HR	30217
BLANKS	36	-70	19
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 4:53:27 PM	P_ID	080916AR
RUN TYPE	BLANK	USER ID	alpha
		MODE	CHN

SIGNALS

	ZR	26637	AVERAGE RESULTS
CARBON	-8	NR	26629
HYDROGEN	-57	CR	26621
NITROGEN	-8	HR	26564
FILL TIME	29 Seconds		CARBON
			14
			HYDROGEN
			-64
			NITROGEN
			5

DATE & TIME	8/9/2016 4:58:21 PM	P_ID	080916AR
SAMPLE ID	162379116	USER ID	alpha
WEIGHT (mg)	12.210	MODE	CHN

SIGNALS

	ZR	26639	
CARBON	1.204%	NR	26734
HYDROGEN	4.934%	CR	29590
NITROGEN	0.698%	HR	29558
BLANKS	14	-64	5
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 5:03:12 PM	P_ID	080916AR
SAMPLE ID	162379116	USER ID	alpha
WEIGHT (mg)	12.210	MODE	CHN

SIGNALS

	ZR	26633	
CARBON	1.331%	NR	26733
HYDROGEN	4.702%	CR	29943
NITROGEN	0.724%	HR	29910
BLANKS	14	-64	5
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1

FILL TIME 29 Seconds

DATE & TIME	8/9/2016 5:08:03 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.360	MODE	CHN

SIGNALS

ZR	26640
NR	26750
CR	28750
HR	28811

CARBON	0.975%
HYDROGEN	22.344%
NITROGEN	0.944%
BLANKS	14 -64 5
K FACTORS	19.660 0.054 1.074
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/9/2016 5:12:47 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.460	MODE	CHN

SIGNALS

ZR	26639
NR	26637
CR	26689
HR	26634

CARBON	0.975%
HYDROGEN	22.344%
NITROGEN	0.944%
BLANKS	14 -64 5
K FACTORS	19.660 0.054 1.074
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/10/2016 5:38:07 AM	P_ID	080916AR
SAMPLE ID	162379108	USER ID	alpha
WEIGHT (mg)	8.390	MODE	CHN

SIGNALS

ZR	26858
NR	27882
CR	30030
HR	29924

CARBON	1.276%
HYDROGEN	9.140%
NITROGEN	11.149%
BLANKS	14 -64 5
K FACTORS	19.660 0.054 1.074
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	34 Seconds

DATE & TIME	8/10/2016 8:43:04 AM	P_ID	080916AR
SAMPLE ID	162379108	USER ID	alpha
WEIGHT (mg)	8.390	MODE	CHN

SIGNALS

ZR	26792
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CARBON	1.427%	NR	27118
HYDROGEN	-2.428%	CR	29485
NITROGEN	3.562%	HR	29410
BLANKS	14	-64	5
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	34 Seconds		

DATE & TIME	8/10/2016 8:48:03 AM	P_ID	080916AR
SAMPLE ID	162379110MS	USER ID	alpha
WEIGHT (mg)	14.150	MODE	CHN

SIGNALS

		ZR	26810
CARBON	2.387%	NR	27060
HYDROGEN	4.057%	CR	33715
NITROGEN	1.612%	HR	33682
BLANKS	14	-64	5
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	32 Seconds		

DATE & TIME	8/10/2016 8:53:01 AM	P_ID	080916AR
SAMPLE ID	162379110MS	USER ID	alpha
WEIGHT (mg)	15.080	MODE	CHN

SIGNALS

		ZR	26814
CARBON	2.322%	NR	27019
HYDROGEN	4.666%	CR	33917
NITROGEN	1.235%	HR	33891
BLANKS	14	-64	5
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	31 Seconds		

DATE & TIME	8/10/2016 9:05:20 AM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.210	MODE	CHN

SIGNALS

		ZR	26822
CARBON	0.797%	NR	27020
HYDROGEN	12.696%	CR	28633
NITROGEN	1.760%	HR	28639
BLANKS	14	-64	5
K FACTORS	19.660	0.054	1.074
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	28 Seconds		

DATE & TIME 8/10/2016 9:09:58 AM  
SAMPLE ID CCB  
WEIGHT (mg) 77.260

P\_ID 080916AR  
USER ID alpha  
MODE CHN

SIGNALS

CARBON	0.002%	ZR	26805
HYDROGEN	0.911%	NR	26786
NITROGEN	-0.29%	CR	26836
BLANKS	14 -64 5	HR	26810
K FACTORS	19.660 0.054 1.074		
FILL	COMB BOOST1 BOOST2		
1	2 1 1		
FILL TIME	28 Seconds		



DATE & TIME 8/9/2016 10:34:45 AM P\_ID 080916AR  
SAMPLE ID COND USER ID mansfield\_toc1  
WEIGHT (mg) 7.500 MODE CHN

SIGNALS  
ZR 15010  
NR 15565  
CR 20722  
HR 38735  
BLANKS 44 620 342  
K FACTORS 13.656 24.958 0.201  
FILL COMB BOOST1 BOOST2  
0 0 0 0  
FILL TIME 34 Seconds

DATE & TIME 8/9/2016 10:40:55 AM P\_ID 080916AR  
RUN TYPE K1 USER ID mansfield\_toc1  
WEIGHT (mg) 10.350 MODE CHN

SIGNALS  
ZR 15015 AVERAGE RESULTS  
NR 15203 KC 14.881  
CR 16914 KH 24.958  
HR 34207 KN 0.201  
BLANKS 44 620 342  
K FACTORS 1.0% 5.03% 11.67%  
FILL TIME 30 Seconds  
NUMBER MESSAGE  
8 CHECK FOR SAMPLE DROP

DATE & TIME 8/9/2016 10:46:55 AM P\_ID 080916AR  
RUN TYPE BLANK USER ID mansfield\_toc1  
MODE CHN

SIGNALS  
ZR 15024 AVERAGE RESULTS  
NR 15135 CARBON 44  
CR 15386 HYDROGEN 620  
HR 32224 NITROGEN 342  
CARBON 251  
HYDROGEN 16838  
NITROGEN 111  
FILL TIME 28 Seconds

DATE & TIME 8/9/2016 10:51:43 AM P\_ID 080916AR  
RUN TYPE K1 USER ID mansfield\_toc1  
WEIGHT (mg) 10.200 MODE CHN

SIGNALS  
ZR 15046 AVERAGE RESULTS  
NR 15140 KC 15.028  
CR 16732 KH 30.792  
HR 32517 KN 0.201  
BLANKS 44 620 342  
K FACTORS 1.0% 5.03% 11.67%  
FILL TIME 29 Seconds

NUMBER MESSAGE  
8 CHECK FOR SAMPLE DROP

DATE & TIME 8/9/2016 11:09:55 AM P\_ID 080916AR  
 RUN TYPE K1 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.320 MODE CHN

SIGNALS

	ZR	15007	AVERAGE RESULTS	
KC	NR	15117	KC	14.786
KH	CR	16662	KH	30.792
KN	HR	29916	KN	0.201
BLANKS	44	620	342	
K FACTORS	1.0%	5.03%	11.67%	
FILL TIME	35 Seconds			

NUMBER MESSAGE  
8 CHECK FOR SAMPLE DROP

DATE & TIME 8/9/2016 11:25:03 AM P\_ID 080916AR  
 RUN TYPE BLANK USER ID mansfield\_toc1  
 MODE CHN

SIGNALS

	ZR	15007	AVERAGE RESULTS	
CARBON	NR	15110	CARBON	75
HYDROGEN	CR	15216	HYDROGEN	620
NITROGEN	HR	18630	NITROGEN	107
FILL TIME	30 Seconds			

NUMBER MESSAGE  
16 HYDROGEN BLANK OUT OF TOLERANCE

DATE & TIME 8/9/2016 11:30:36 AM P\_ID 080916AR  
 SAMPLE ID 0 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.300 MODE CHN

SIGNALS

	ZR	15009		
CARBON	NR	15099		
HYDROGEN	CR	15174		
NITROGEN	HR	28001		
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME 8/9/2016 11:35:24 AM P\_ID 080916AR  
 SAMPLE ID 1000 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.410 MODE CHN

SIGNALS

ZR 15042

CARBON	0.082%	NR	15133
HYDROGEN	3.694%	CR	15334
NITROGEN	-765%	HR	27794
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:40:12 AM	P_ID	080916AR
SAMPLE ID	5000	USER ID	mansfield_toc1
WEIGHT (mg)	10.380	MODE	CHN

SIGNALS

		ZR	15058
CARBON	0.453%	NR	15146
HYDROGEN	3.799%	CR	15917
NITROGEN	-911%	HR	28680
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:45:01 AM	P_ID	080916AR
SAMPLE ID	10000	USER ID	mansfield_toc1
WEIGHT (mg)	10.510	MODE	CHN

SIGNALS

		ZR	15046
CARBON	0.911%	NR	15136
HYDROGEN	3.901%	CR	16627
NITROGEN	-805%	HR	29871
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:49:50 AM	P_ID	080916AR
SAMPLE ID	20000	USER ID	mansfield_toc1
WEIGHT (mg)	10.820	MODE	CHN

SIGNALS

		ZR	15059
CARBON	1.766%	NR	15152
HYDROGEN	3.656%	CR	18053
NITROGEN	.644%	HR	30854
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:54:39 AM	P_ID	080916AR
SAMPLE ID	40000	USER ID	mansfield_toc1
WEIGHT (mg)	11.200	MODE	CHN

SIGNALS			
	ZR	15067	
CARBON	3.642%	NR	15159
HYDROGEN	3.540%	CR	21265
NITROGEN	-.666%	HR	34093
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 12:01:41 PM	P_ID	080916AR
SAMPLE ID	ICV	USER ID	mansfield_toc1
WEIGHT (mg)	10.600	MODE	CHN

SIGNALS			
	ZR	15030	
CARBON	0.912%	NR	15109
HYDROGEN	3.745%	CR	16613
NITROGEN	-1.314%	HR	29455
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 12:06:28 PM	P_ID	080916AR
SAMPLE ID	ICB	USER ID	mansfield_toc1
WEIGHT (mg)	107.200	MODE	CHN

SIGNALS			
	ZR	15042	
CARBON	-.001%	NR	15118
HYDROGEN	0.031%	CR	15181
NITROGEN	-.144%	HR	16813
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 12:11:16 PM	P_ID	080916AR
SAMPLE ID	HICV	USER ID	mansfield_toc1
WEIGHT (mg)	52.190	MODE	CHN

SIGNALS			
	ZR	15038	
CARBON	3.674%	NR	15122
HYDROGEN	0.784%	CR	43545
NITROGEN	-.219%	HR	56770
BLANKS	75	620	107

K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 12:28:07 PM P\_ID 080916AR  
 SAMPLE ID SRM1944 USER ID mansfield\_toc1  
 WEIGHT (mg) 13.840 MODE CHN

SIGNALS  
 ZR 15035  
 CARBON 4.116% NR 15287  
 HYDROGEN 4.250% CR 23785  
 NITROGEN 5.212% HR 42515  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 32 Seconds

DATE & TIME 8/9/2016 12:41:25 PM P\_ID 080916AR  
 SAMPLE ID MB USER ID mansfield\_toc1  
 WEIGHT (mg) 53.030 MODE CHN

SIGNALS  
 ZR 15011  
 CARBON -0.001% NR 15094  
 HYDROGEN 0.252% CR 15161  
 NITROGEN -1.89% HR 20663  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 12:46:12 PM P\_ID 080916AR  
 SAMPLE ID SRM1944 USER ID mansfield\_toc1  
 WEIGHT (mg) 7.860 MODE CHN

SIGNALS  
 ZR 15023  
 CARBON 3.784% NR 15194  
 HYDROGEN 1.076% CR 19667  
 NITROGEN 4.051% HR 22890  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 12:51:00 PM P\_ID 080916AR  
 SAMPLE ID MB USER ID mansfield\_toc1  
 WEIGHT (mg) 53.510 MODE CHN

				SIGNALS
				ZR 15009
CARBON	-005%			NR 15091
HYDROGEN	0.034%			CR 15126
NITROGEN	-232%			HR 16312
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 12:55:47 PM	P_ID	080916AR
SAMPLE ID	162354905	USER ID	mansfield_toc1
WEIGHT (mg)	9.600	MODE	CHN

				SIGNALS
				ZR 15003
CARBON	5.216%			NR 15220
HYDROGEN	1.020%			CR 22699
NITROGEN	5.701%			HR 26334
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 1:00:35 PM	P_ID	080916AR
SAMPLE ID	162354905	USER ID	mansfield_toc1
WEIGHT (mg)	10.860	MODE	CHN

				SIGNALS
				ZR 15021
CARBON	5.209%			NR 15254
HYDROGEN	1.001%			CR 23693
NITROGEN	5.772%			HR 27660
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 1:05:23 PM	P_ID	080916AR
SAMPLE ID	162354906	USER ID	mansfield_toc1
WEIGHT (mg)	14.030	MODE	CHN

				SIGNALS
				ZR 15022
CARBON	6.721%			NR 15314
HYDROGEN	1.155%			CR 29331
NITROGEN	6.560%			HR 34939
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 1:10:11 PM	P_ID	080916AR
SAMPLE ID	162354906	USER ID	mansfield_toc1
WEIGHT (mg)	12.480	MODE	CHN

SIGNALS			
	ZR	15024	
CARBON	6.646%	NR	15290
HYDROGEN	1.140%	CR	27629
NITROGEN	6.339%	HR	32630
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:14:59 PM	P_ID	080916AR
SAMPLE ID	162354907	USER ID	mansfield_toc1
WEIGHT (mg)	13.780	MODE	CHN

SIGNALS			
	ZR	15023	
CARBON	2.880%	NR	15224
HYDROGEN	0.617%	CR	21167
NITROGEN	3.394%	HR	24403
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:19:46 PM	P_ID	080916AR
SAMPLE ID	162354907	USER ID	mansfield_toc1
WEIGHT (mg)	16.280	MODE	CHN

SIGNALS			
	ZR	15024	
CARBON	2.482%	NR	15226
HYDROGEN	0.531%	CR	21275
NITROGEN	2.903%	HR	24559
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:24:34 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.580	MODE	CHN

SIGNALS			
	ZR	15021	
CARBON	0.897%	NR	15106
HYDROGEN	3.886%	CR	16584
NITROGEN	1.035%	HR	29863

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:29:22 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	81.070	MODE	CHN

SIGNALS

ZR	15038
NR	15119
CR	15156
HR	16337

CARBON	-003%
HYDROGEN	0.022%
NITROGEN	-160%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	29 Seconds

DATE & TIME	8/9/2016 1:39:23 PM	P_ID	080916AR
SAMPLE ID	162354909	USER ID	mansfield_toc1
WEIGHT (mg)	12.310	MODE	CHN

SIGNALS

ZR	15008
NR	15140
CR	17855
HR	19785

CARBON	1.450%
HYDROGEN	0.346%
NITROGEN	1.010%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	29 Seconds

DATE & TIME	8/9/2016 1:44:11 PM	P_ID	080916AR
SAMPLE ID	162354909	USER ID	mansfield_toc1
WEIGHT (mg)	12.860	MODE	CHN

SIGNALS

ZR	15008
NR	15146
CR	18158
HR	20014

CARBON	1.545%
HYDROGEN	0.312%
NITROGEN	1.199%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	29 Seconds

DATE & TIME	8/9/2016 1:48:59 PM	P_ID	080916AR
SAMPLE ID	162354910	USER ID	mansfield_toc1
WEIGHT (mg)	9.760	MODE	CHN



				SIGNALS	
				ZR	14999
CARBON	2.312%			NR	15147
HYDROGEN	0.366%			CR	18558
NITROGEN	2.090%			HR	20277
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 1:53:47 PM	P_ID	080916AR
SAMPLE ID	162354910	USER ID	mansfield_toc1
WEIGHT (mg)	11.310	MODE	CHN

				SIGNALS	
				ZR	15008
CARBON	2.337%			NR	15173
HYDROGEN	0.395%			CR	19156
NITROGEN	2.551%			HR	21150
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 1:58:35 PM	P_ID	080916AR
SAMPLE ID	162354918	USER ID	mansfield_toc1
WEIGHT (mg)	12.290	MODE	CHN

				SIGNALS	
				ZR	15004
CARBON	9.850%			NR	15517
HYDROGEN	1.403%			CR	33492
NITROGEN	16.435%			HR	39422
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 2:03:23 PM	P_ID	080916AR
SAMPLE ID	162354918	USER ID	mansfield_toc1
WEIGHT (mg)	20.030	MODE	CHN

				SIGNALS	
				ZR	15014
CARBON	10.018%			NR	15802
HYDROGEN	1.532%			CR	45548
NITROGEN	16.915%			HR	55614
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 2:08:11 PM	P_ID	080916AR
SAMPLE ID	162354919	USER ID	mansfield_toc1
WEIGHT (mg)	15.680	MODE	CHN

SIGNALS			
	ZR	15024	
CARBON	NR	15658	
HYDROGEN	CR	39041	
NITROGEN	HR	47036	
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 2:12:59 PM	P_ID	080916AR
SAMPLE ID	162354919	USER ID	mansfield_toc1
WEIGHT (mg)	16.750	MODE	CHN

SIGNALS			
	ZR	15022	
CARBON	NR	15730	
HYDROGEN	CR	41936	
NITROGEN	HR	50710	
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 2:17:47 PM	P_ID	080916AR
SAMPLE ID	162354919D	USER ID	mansfield_toc1
WEIGHT (mg)	14.400	MODE	CHN

SIGNALS			
	ZR	15025	
CARBON	NR	15631	
HYDROGEN	CR	38405	
NITROGEN	HR	46011	
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 2:22:35 PM	P_ID	080916AR
SAMPLE ID	162354919D	USER ID	mansfield_toc1
WEIGHT (mg)	15.600	MODE	CHN

SIGNALS			
	ZR	15025	
CARBON	NR	15693	
HYDROGEN	CR	40493	
NITROGEN	HR	48779	

BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 2:27:23 PM P\_ID 080916AR  
 SAMPLE ID CCV USER ID mansfield\_toc1  
 WEIGHT (mg) 10.300 MODE CHN

SIGNALS

ZR 15023  
 NR 15106  
 CR 16555  
 HR 30139  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 2:32:12 PM P\_ID 080916AR  
 SAMPLE ID CCB USER ID mansfield\_toc1  
 WEIGHT (mg) 86.440 MODE CHN

SIGNALS

ZR 15044  
 NR 15145  
 CR 15190  
 HR 16243  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 31 Seconds

DATE & TIME 8/9/2016 2:37:02 PM P\_ID 080916AR  
 SAMPLE ID 162354919MS USER ID mansfield\_toc1  
 WEIGHT (mg) 20.490 MODE CHN

SIGNALS

ZR 15024  
 NR 15881  
 CR 50006  
 HR 63160  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 31 Seconds

DATE & TIME 8/9/2016 2:41:52 PM P\_ID 080916AR  
 SAMPLE ID 162354919MS USER ID mansfield\_toc1  
 WEIGHT (mg) 16.330 MODE CHN

SIGNALS			
ZR	15042		
NR	15749		
CR	43311		
HR	56641		
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	32 Seconds		

DATE & TIME	8/9/2016 2:47:49 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.210	MODE	CHN

SIGNALS			
ZR	15044		
NR	15138		
CR	16458		
HR	29768		
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	36 Seconds		

DATE & TIME	8/9/2016 2:52:45 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	62.310	MODE	CHN

SIGNALS			
ZR	15055		
NR	15151		
CR	15191		
HR	16456		
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	37 Seconds		

DATE & TIME	8/9/2016 3:11:23 PM	P_ID	080916AR
SAMPLE ID	162354904	USER ID	mansfield_toc1
WEIGHT (mg)	5.660 5.71	MODE	CHN

SIGNALS			
ZR	15014		
NR	15221		
CR	22462		
HR	25433		
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 3:16:11 PM	P_ID	080916AR
SAMPLE ID	162354904	USER ID	mansfield_toc1
WEIGHT (mg)	<del>6.380</del> 6.43	MODE	CHN

SIGNALS			
	ZR	15005	
CARBON	<del>8.364%</del> 8.299	NR	15237
HYDROGEN	1.325%	CR	23202
NITROGEN	9.748%	HR	26425
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 4:18:50 PM	P_ID	080916AR
SAMPLE ID	162354908	USER ID	mansfield_toc1
WEIGHT (mg)	<del>5.290</del> 5.25	MODE	CHN

SIGNALS			
	ZR	14984	
CARBON	<del>7.497%</del> 7.55	NR	15236
HYDROGEN	1.249%	CR	21175
NITROGEN	13.637%	HR	23830
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	31 Seconds		

DATE & TIME	8/9/2016 4:23:39 PM	P_ID	080916AR
SAMPLE ID	162354908	USER ID	mansfield_toc1
WEIGHT (mg)	<del>6.650</del> 6.60	MODE	CHN

SIGNALS			
	ZR	14991	
CARBON	<del>7.818%</del> 7.877	NR	15258
HYDROGEN	1.310%	CR	23020
NITROGEN	11.970%	HR	26323
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	31 Seconds		

DATE & TIME	8/9/2016 4:28:29 PM	P_ID	080916AR
SAMPLE ID	162354911	USER ID	mansfield_toc1
WEIGHT (mg)	<del>6.580</del> 6.52	MODE	CHN

SIGNALS			
	ZR	14996	
CARBON	<del>4.226%</del> 4.205	NR	15184
HYDROGEN	0.655%	CR	19371
NITROGEN	6.124%	HR	21319

BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
~~0~~ ~~0~~ ~~0~~ ~~0~~  
 FILL TIME 31 Seconds

DATE & TIME 8/9/2016 4:33:18 PM P\_ID 080916AR  
 SAMPLE ID 162354911 USER ID mansfield\_toc1  
 WEIGHT (mg) ~~8.650~~ 8.57 MODE CHN

SIGNALS  
 ZR 14998  
 NR 15214  
 CR 21043  
 HR 23498

CARBON 4.499% 4.541  
 HYDROGEN 0.689%  
 NITROGEN 6.269%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
~~0~~ ~~0~~ ~~0~~ ~~0~~  
 FILL TIME 30 Seconds

DATE & TIME 8/9/2016 4:38:07 PM P\_ID 080916AR  
 SAMPLE ID 162354903 USER ID mansfield\_toc1  
 WEIGHT (mg) ~~9.090~~ 9.08 MODE CHN

SIGNALS  
 ZR 15003  
 NR 15217  
 CR 20322  
 HR 22606

CARBON 3.742% 3.746  
 HYDROGEN 0.594%  
 NITROGEN 5.856%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
~~0~~ ~~0~~ ~~0~~ ~~0~~  
 FILL TIME 30 Seconds

DATE & TIME 8/9/2016 4:42:56 PM P\_ID 080916AR  
 SAMPLE ID 162354903 USER ID mansfield\_toc1  
 WEIGHT (mg) ~~9.840~~ 9.83 MODE CHN

SIGNALS  
 ZR 15009  
 NR 15268  
 CR 21401  
 HR 24268

CARBON 4.164% 4.168  
 HYDROGEN 0.742%  
 NITROGEN 7.685%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
~~0~~ ~~0~~ ~~0~~ ~~0~~  
 FILL TIME 31 Seconds

DATE & TIME 8/9/2016 4:47:46 PM P\_ID 080916AR  
 SAMPLE ID 162354902 USER ID mansfield\_toc1  
 WEIGHT (mg) ~~12.880~~ 12.90 MODE CHN

				SIGNALS	
				ZR	15009
CARBON	0.355%	.354		NR	15128
HYDROGEN	0.219%			CR	15880
NITROGEN	0.464%			HR	17369
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	31 Seconds				

DATE & TIME	8/9/2016 4:52:36 PM	P_ID	080916AR
SAMPLE ID	162354902	USER ID	mansfield_toc1
WEIGHT (mg)	16.250 16.27	MODE	CHN

				SIGNALS	
				ZR	15009
CARBON	0.300%	.299		NR	15134
HYDROGEN	0.216%			CR	15930
NITROGEN	0.551%			HR	17633
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	31 Seconds				

DATE & TIME	8/9/2016 4:57:26 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.350	MODE	CHN

				SIGNALS	
				ZR	15010
CARBON	0.901%			NR	15233
HYDROGEN	3.969%			CR	16687
NITROGEN	5.576%			HR	29955
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	32 Seconds				

DATE & TIME	8/9/2016 5:02:17 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	61.910	MODE	CHN

				SIGNALS	
				ZR	15038
CARBON	-0.002%			NR	15136
HYDROGEN	0.009%			CR	15191
NITROGEN	-0.072%			HR	15982
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	32 Seconds				

DATE & TIME	8/10/2016 8:09:57 AM	P_ID	080916AR
SAMPLE ID	16354901	USER ID	mansfield_toc1
WEIGHT (mg)	<del>16.610</del> 16.63	MODE	CHN

SIGNALS			
	ZR	15035	
CARBON	0.399%	NR	15901
HYDROGEN	0.338%	CR	16955
NITROGEN	22.734%	HR	19304
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 8:14:44 AM	P_ID	080916AR
SAMPLE ID	162354901	USER ID	mansfield_toc1
WEIGHT (mg)	<del>15.160</del> 15.18	MODE	CHN

SIGNALS			
	ZR	15041	
CARBON	<del>0.387%</del> 380	NR	15368
HYDROGEN	0.331%	CR	16311
NITROGEN	7.220%	HR	18477
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 8:19:30 AM	P_ID	080916AR
SAMPLE ID	162354605	USER ID	mansfield_toc1
WEIGHT (mg)	<del>11.160</del> 11.12	MODE	CHN

SIGNALS			
	ZR	15050	
CARBON	<del>1.956%</del> 1.963	NR	15266
HYDROGEN	0.509%	CR	18568
NITROGEN	4.859%	HR	20938
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 8:24:17 AM	P_ID	080916AR
SAMPLE ID	162354605	USER ID	mansfield_toc1
WEIGHT (mg)	<del>10.620</del> 10.58	MODE	CHN

SIGNALS			
	ZR	15038	
CARBON	<del>1.764%</del> 1.771	NR	15197
HYDROGEN	0.466%	CR	18042
NITROGEN	2.436%	HR	20186



BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 28 Seconds

DATE & TIME 8/10/2016 8:29:03 AM P\_ID 080916AR  
 SAMPLE ID 162354606 USER ID mansfield\_toc1  
 WEIGHT (mg) 15.370 MODE CHN

SIGNALS  
 ZR 15047  
 NR 15215  
 CR 18670  
 HR 21558

CARBON 1.487%  
 HYDROGEN 0.479%  
 NITROGEN 1.975%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 28 Seconds

DATE & TIME 8/10/2016 8:32:10 AM P\_ID 080916AR  
 SAMPLE ID 162354606 USER ID mansfield\_toc1  
 WEIGHT (mg) 15.350 MODE CHN

SIGNALS  
 ZR 15035  
 NR 15187  
 CR 18234  
 HR 21138

CARBON 1.242%  
 HYDROGEN 0.458%  
 NITROGEN 1.383%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 28 Seconds

DATE & TIME 8/10/2016 8:38:36 AM P\_ID 080916AR  
 SAMPLE ID 162354617 USER ID mansfield\_toc1  
 WEIGHT (mg) 7.760 7.18 MODE CHN

SIGNALS  
 ZR 15045  
 NR 15523  
 CR 31953  
 HR 38413

CARBON 14.254% 14.102  
 HYDROGEN 2.444%  
 NITROGEN 23.786%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 28 Seconds

DATE & TIME 8/10/2016 8:43:23 AM P\_ID 080916AR  
 SAMPLE ID 162354617 USER ID mansfield\_toc1  
 WEIGHT (mg) 5.290 5.24 MODE CHN

				SIGNALS
				ZR 15045
CARBON	13.762%			NR 15384
HYDROGEN	2.420%			CR 26223
NITROGEN	21.819%			HR 30785
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 8:48:10 AM	P_ID	080916AR
SAMPLE ID	162354618	USER ID	mansfield_toc1
WEIGHT (mg)	5.680 5.69	MODE	CHN

				SIGNALS
				ZR 15042
CARBON	<del>18.564%</del> 18.531			NR 15466
HYDROGEN	2.897%			CR 31132
NITROGEN	27.766%			HR 36818
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 8:52:56 AM	P_ID	080916AR
SAMPLE ID	162354618	USER ID	mansfield_toc1
WEIGHT (mg)	6.310 6.32	MODE	CHN

				SIGNALS
				ZR 15062
CARBON	<del>18.954%</del> 18.924			NR 15529
HYDROGEN	3.079%			CR 33288
NITROGEN	28.384%			HR 39891
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 8:57:43 AM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.190	MODE	CHN

				SIGNALS
				ZR 15054
CARBON	0.868%			NR 15147
HYDROGEN	3.457%			CR 16530
NITROGEN	-.684%			HR 27996
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 9:02:30 AM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	52.020	MODE	CHN

SIGNALS			
	ZR	15094	
CARBON	-0.008%	NR	15175
HYDROGEN	0.006%	CR	15192
NITROGEN	-0.249%	HR	15910
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/10/2016 9:07:56 AM	P_ID	080916AR
SAMPLE ID	162354619	USER ID	mansfield_toc1
WEIGHT (mg)	<del>10.620</del> 10.61	MODE	CHN

SIGNALS			
	ZR	15075	
CARBON	<del>2.490%</del> 2.492	NR	15290
HYDROGEN	0.594%	CR	19275
NITROGEN	5.059%	HR	21837
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	34 Seconds		

DATE & TIME	8/10/2016 9:12:43 AM	P_ID	080916AR
SAMPLE ID	162354619	USER ID	mansfield_toc1
WEIGHT (mg)	<del>9.170</del> 9.16	MODE	CHN

SIGNALS			
	ZR	15067	
CARBON	<del>2.334%</del> 2.337	NR	15249
HYDROGEN	0.559%	CR	18489
NITROGEN	4.069%	HR	20687
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 9:20:42 AM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.250	MODE	CHN

SIGNALS			
	ZR	15059	
CARBON	0.894%	NR	15136
HYDROGEN	4.113%	CR	16566
NITROGEN	-1.456%	HR	30168

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 9:25:29 AM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	86.470	MODE	CHN

SIGNALS

ZR	15069
NR	15142
CR	15171
HR	16119

CARBON	-0.04%
HYDROGEN	0.012%
NITROGEN	-0.196%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 10:48:38 AM	P_ID	080916AR
SAMPLE ID	162379117	USER ID	mansfield_toc1
WEIGHT (mg)	8.100	MODE	CHN

SIGNALS

ZR	15036
NR	15226
CR	16711
HR	18833

CARBON	1.177%
HYDROGEN	0.602%
NITROGEN	5.098%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 10:53:25 AM	P_ID	080916AR
SAMPLE ID	162379117	USER ID	mansfield_toc1
WEIGHT (mg)	8.570	MODE	CHN

SIGNALS

ZR	15039
NR	15181
CR	16583
HR	18629

CARBON	1.047%
HYDROGEN	0.540%
NITROGEN	2.032%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 10:58:12 AM	P_ID	080916AR
SAMPLE ID	162379118	USER ID	mansfield_toc1
WEIGHT (mg)	10.930	MODE	CHN

				SIGNALS
				ZR 15033
CARBON	1.106%			NR 15182
HYDROGEN	0.535%			CR 17045
NITROGEN	1.912%			HR 19464
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 11:02:58 AM	P_ID	080916AR
SAMPLE ID	162379118	USER ID	mansfield_toc1
WEIGHT (mg)	7.850	MODE	CHN

				SIGNALS
				ZR 15047
CARBON	0.974%			NR 15168
HYDROGEN	0.478%			CR 16374
NITROGEN	0.887%			HR 18150
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 11:07:45 AM	P_ID	080916AR
SAMPLE ID	162379119	USER ID	mansfield_toc1
WEIGHT (mg)	11.650	MODE	CHN

				SIGNALS
				ZR 15043
CARBON	1.044%			NR 15192
HYDROGEN	0.558%			CR 17065
NITROGEN	1.794%			HR 19686
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 11:12:32 AM	P_ID	080916AR
SAMPLE ID	162379119	USER ID	mansfield_toc1
WEIGHT (mg)	5.790	MODE	CHN

				SIGNALS
				ZR 15053
CARBON	1.135%			NR 15166
HYDROGEN	0.432%			CR 16213
NITROGEN	0.516%			HR 17604
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 11:17:19 AM	P_ID	080916AR
SAMPLE ID	162379120	USER ID	mansfield_toc1
WEIGHT (mg)	16.790	MODE	CHN

SIGNALS			
	ZR	15039	
CARBON	1.176%	NR	15224
HYDROGEN	0.635%	CR	18218
NITROGEN	2.311%	HR	22120
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 11:22:06 AM	P_ID	080916AR
SAMPLE ID	162379120	USER ID	mansfield_toc1
WEIGHT (mg)	10.310	MODE	CHN

SIGNALS			
	ZR	15063	
CARBON	1.070%	NR	15200
HYDROGEN	0.625%	CR	16906
NITROGEN	1.448%	HR	19511
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 11:26:53 AM	P_ID	080916AR
SAMPLE ID	162379120D	USER ID	mansfield_toc1
WEIGHT (mg)	6.970	MODE	CHN

SIGNALS			
	ZR	15058	
CARBON	1.095%	NR	15178
HYDROGEN	0.529%	CR	16382
NITROGEN	0.928%	HR	18138
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 11:31:40 AM	P_ID	080916AR
SAMPLE ID	162379120D	USER ID	mansfield_toc1
WEIGHT (mg)	14.500	MODE	CHN

SIGNALS			
	ZR	15062	
CARBON	1.127%	NR	15231
HYDROGEN	0.644%	CR	17722
NITROGEN	2.127%	HR	21216

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 11:36:26 AM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.490	MODE	CHN

SIGNALS

ZR	15065
NR	15139
CR	16586
HR	29704

CARBON	0.885%
HYDROGEN	3.869%
NITROGEN	-1.565%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 11:41:14 AM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	39.700	MODE	CHN

SIGNALS

ZR	15073
NR	15163
CR	15181
HR	15883

CARBON	-0.010%
HYDROGEN	0.007%
NITROGEN	-0.213%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	29 Seconds

DATE & TIME	8/10/2016 11:47:11 AM	P_ID	080916AR
SAMPLE ID	162379120MS	USER ID	mansfield_toc1
WEIGHT (mg)	13.610	MODE	CHN

SIGNALS

ZR	15049
NR	15217
CR	19070
HR	32318

CARBON	1.877%
HYDROGEN	3.013%
NITROGEN	2.230%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	29 Seconds

DATE & TIME	8/10/2016 11:51:58 AM	P_ID	080916AR
SAMPLE ID	162379120MS	USER ID	mansfield_toc1
WEIGHT (mg)	15.490	MODE	CHN

				SIGNALS
				ZR 15063
CARBON	1.810%			NR 15248
HYDROGEN	2.631%			CR 19468
NITROGEN	2.505%			HR 32639
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 11:56:45 AM	P_ID	080916AR
SAMPLE ID	162354604	USER ID	mansfield_toc1
WEIGHT (mg)	10.030	MODE	CHN

				SIGNALS
				ZR 15082
CARBON	1.272%			NR 15194
HYDROGEN	0.500%			CR 17156
NITROGEN	0.248%			HR 19321
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 12:01:33 PM	P_ID	080916AR
SAMPLE ID	162354604	USER ID	mansfield_toc1
WEIGHT (mg)	17.310	MODE	CHN

				SIGNALS
				ZR 15064
CARBON	1.356%			NR 15207
HYDROGEN	0.375%			CR 18753
NITROGEN	1.035%			HR 21372
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/10/2016 12:06:20 PM	P_ID	080916AR
SAMPLE ID	SRM1944	USER ID	mansfield_toc1
WEIGHT (mg)	8.740	MODE	CHN

				SIGNALS
				ZR 15063
CARBON	4.066%			NR 15241
HYDROGEN	0.513%			CR 20570
NITROGEN	4.042%			HR 22571
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			



DATE & TIME	8/10/2016 12:11:07 PM	P_ID	080916AR
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	52.960	MODE	CHN

SIGNALS			
	ZR	15053	
CARBON	0.005%	NR	15134
HYDROGEN	-0.019%	CR	15248
NITROGEN	-0.244%	HR	15562
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/10/2016 12:15:54 PM	P_ID	080916AR
SAMPLE ID	SRM1944	USER ID	mansfield_toc1
WEIGHT (mg)	6.690	MODE	CHN

SIGNALS			
	ZR	15054	
CARBON	3.770%	NR	15202
HYDROGEN	0.333%	CR	19006
NITROGEN	3.049%	HR	20313
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 12:20:46 PM	P_ID	080916AR
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	82.910	MODE	CHN

SIGNALS			
	ZR	15044	
CARBON	-0.002%	NR	15129
HYDROGEN	-0.014%	CR	15180
NITROGEN	-0.132%	HR	15431
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	34 Seconds		

DATE & TIME	8/10/2016 12:25:38 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.580	MODE	CHN

SIGNALS			
	ZR	15059	
CARBON	0.906%	NR	15163
HYDROGEN	3.908%	CR	16656
NITROGEN	-0.141%	HR	30008

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	34 Seconds		

DATE & TIME	8/10/2016 12:30:30 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	53.300	MODE	CHN

SIGNALS

		ZR	15080
CARBON	-007%	NR	15165
HYDROGEN	0.019%	CR	15186
NITROGEN	-205%	HR	16115
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	34 Seconds		

# **Work Group**

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 15 2016, 09:39 am

Work Group: WG921180 for Department: 7 Wet Chemistry

Created: 09-AUG-16 Due: Operator: AR

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623546-10	W-65-HIGH_072516_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-11	W-65-INTERTIDAL_0725	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-12	W-65-LOW_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-13	W-65-MID_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-14	ES-15_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-15	SVE-01_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-12	W-21-HIGH_072516_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-13	W-21-INTERTIDAL_0725	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-14	W-21-LOW_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-15	W-21-MID_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-16	W-21UM-CENTRAL-C_072	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-17	W-21UM-EAST-C_072516	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
WG921180-1	Laboratory Method Bl	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-3	Duplicate Sample	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-4	Matrix Spike	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-5	Matrix Spike Duplica	S A2-TOC-LK-2REPS	SOIL	DONE	U				
Comments:									
WG921180-3	L1623549-14								
WG921180-4	L1623549-14								
WG921180-5	L1623549-14								

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 15 2016, 09:39 am

Work Group: WG921544 for Department: 7 Wet Chemistry

Created: 10-AUG-16 Due: Operator: ar

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623546-01	W-61-HIGH_072716_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-02	W-61-INTERTIDAL-0727	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-03	W-61-LOW_072716_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-07	W-63-INTERTIDAL_0726	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623546-08	W-63-LOW_072616_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623546-09	W-63-MID_072616_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623546-16	OL-01_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-20	W-17-LOW_072616_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623546-21	BO-04-02_072616_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623546-22	BO-04-02_072616_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
WG921544-1	Laboratory Method Bl	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921544-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921544-3	Duplicate Sample	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921544-4	Matrix Spike	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921544-5	Matrix Spike Duplica	S A2-TOC-LK-2REPS	SOIL	DONE	U				
Comments:									
WG921544-3	L1623546-21								
WG921544-4	L1623546-21								
WG921544-5	L1623546-21								

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 15 2016, 09:39 am

Work Group: WG921994 for Department: 7 Wet Chemistry

Created: 11-AUG-16 Due: Operator: AR

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623546-04	W-61-MID_072716_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-05	W-63-HIGH_072116_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-06	W-63-HIGH_072116_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-17	W17-N_072116_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-18	ADD-01_072116_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-19	ADD-02_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-01	OV-04_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-02	OV-01_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-03	OV-02_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-04	BO-05_072016_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0803	0819	S0	Glass-A.06
L1623549-05	OB-05_072616_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623549-06	ES-02_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-07	ES-13_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-08	W-17-HIGH_072116_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623549-09	W-17-INTERTIDAL_0726	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623549-10	W-17-LOW_072616_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623549-11	W-17-MID_072116_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623549-18	W-21UM-SOUTH_072716_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-19	W-21UM-WEST-A_07/27/	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
WG921994-1	Laboratory Method B1	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921994-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921994-3	Duplicate Sample	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921994-4	Matrix Spike	S A2-TOC-LK-2REPS	SOIL	DONE	U				

Comments:

WG921994-3 L1623549-19  
 WG921994-4 L1623549-19

# Sample Preparation



#3 - SN: 241L1308211

SN: 241N8102003

TOC Instrument: #1

(Circle one) #2 - SN: 241N9041221

CCV ID: WJN051116 A-E

SRM 1944 ID: WJN051814 A

Filter Aid ID: WJN0520411 SA

ICV ID: WJN051116 F

Balance ID: 001712

Other SRM ID:

2° Review:

Date: 8/8/16

Analyst: AR/CA

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std	K			01	10.12
Blank				02	83.85
K-Factor	0			03	10.05
Blank	1000			04	10.04
K-Factor	5000			05	10.40
K-Factor	10000			06	10.10
ICV	20000			07	10.44
ICB	40000			08	10.60
tes	ICV			09	10.20
Blank	ICB			10	74.18
	HTCV			11	52.02
	SRM19144			12	7.55
	MB			13	104.11
	SRM19144			14	8.37
	MB			15	74.65
	L1623546	10		16	15.64
		10		17	13.15
		11		18	19.42
		11		19	18.78
		12		20	19.51
		12		21	12.84
		12		22	10.61
	CCV				

#3546 needs wt correction +3549

Document Type: Form

Pre-Qualtrax Document ID: 107-02

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
CCB				23	89.25
L1623546	13			24	8.08
	13			25	9.43
	14			26	11.63
	14			27	15.64
	15			28	11.12
	15			29	6.87
L1623549	12			30	7.93
CCV	12			31	9.44
CCB	13			32	15.51
	13			33	14.06
CCV				34	10.20
CCB				35	55.72
L1623549	14			36	6.35
	14			37	6.48
	14D			38	8.00
	14D			39	5.01
	14MS	10.23		40	11.19
	14MS	10.31		41	11.22
	14MSD	10.22		42	5.92
	14MSD	10.54		43	6.34
CCV	15			44	7.70
CCB					

8.69



TOC Instrument: #1 - SN: 241N8102003 #3 - SN: 241L1308211

(Circle one) #2 - SN: 241N9041221

ICV ID: \_\_\_\_\_  
Balance ID: \_\_\_\_\_  
Other SRM ID: \_\_\_\_\_

CCV ID: \_\_\_\_\_  
SRM 1944 ID: \_\_\_\_\_  
Filter Aid ID: \_\_\_\_\_

Date: 8/8/16  
Analyst: \_\_\_\_\_  
2° Review: \_\_\_\_\_

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor					
Blank					
K Factor					
K Factor					
ICV					
ICB					
LCS					
Blank					
L1623549	15			45	13.13
CCV				46	10.25
CCB				47	65.65
				48	14.30
				49	10.91
CCV				48	10.00
CCB				49	38.70
L1623549	15RR			50	14.30
CCV	15RR			51	10.91
CCB	16			52	7.41
	16			53	5.93
	17			54	7.30

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
L1623549	17			55	9.52
L1624074	01			56	23.38
	01			57	14.15
	02			58	10.90
	02			59	15.73
CCV				60	10.34
CCB				61	52.50
L1624074	03			62	14.84
CCV	03			63	10.33
CCB	04			64	6.28
	04			65	8.41
	05			66	10.31
	05			67	8.45
	06			68	7.53
	06			69	6.54
	02RR			70	13.21
	02RR			71	11.19
CCV				72	10.37
CCB				73	10.90
L1624074	03				
CCV	03				
CCB	04				

TOC Instrument: #1 - SN: 241N8102003 #3 - SN: 241L1308211  
 (Circle one) #2 - SN: 241N9041221

Date: 8/8/14  
 Analyst:   
 2° Review:   
 ICV ID:   
 Balance ID:   
 Other SRM ID:   
 CCV ID:   
 SRM 1944 ID:   
 Filter Aid ID:

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor CCV				74	10.15
Blank CCB				75	92.01
K Factor 15rr	15rr			76	9.70
K Factor 15rr	15rr			77	8.24
1624074	03rr			78	7.70
1624074	03rr			79	5.89594
1624074	04rr			80	5.53
Blank	04rr			81	6.20
CCV				82	10.26
CCB				83	75.19
CCV				84	10.26
CCB				85	59.91
CCV					
CCB					
CCV					
CCB					

TOC Instrument: #1 - SN: 241N8102003  
 (Circle one) #2 SN: 241N9041221  
 Date: 8/11/16  
 Analyst: ARK/CMO  
 2° Review:

ICV ID: WJW05116F  
 Balance ID: WJW05116A  
 Other SRM ID: WJW05116F  
 SRM 1944 ID: WJW05116A  
 Filter Aid ID: WJW05116A

#3 - SN: 241L1308211

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
CCB				23	76.34
L1623546	21MS	10.16		24	5.82
	21MS	10.17		25	5.53
	21MSD	10.21		26	5.90
	21MSD	10.00		27	6.29
	20			28	9.06
	20			29	8.37
	16			30	11.08
eev	16			31	9.17
eeb	09			32	9.57
	09			33	9.23
	CCV			34	10.23
	CCB			35	75.77
L1623546	08			36	10.44
	08			37	11.62
	07			38	7.12
	07			39	9.75
	04			40	11.66
	04			41	10.81
	03			42	11.66
CCV	03			43	14.89
CCB	02			44	17.25

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std				01	10.20
Blank				02	73.52
K Factor 0				03	10.10
Blank 1000				04	10.08
K Factor 5000				05	10.15
K Factor 10000				06	10.34
ICV 20000				07	10.32
ICB 40000				08	10.65
LCS ICV				09	10.22
Blank ICB				10	64.46
HICV				11	51.27
SRM1944				12	8.66
MB				13	61.51
SRM1944				14	7.58
MB				15	86.26
L1623546	22			16	6.49
	22			17	5.90
	21			18	5.34
	21			19	6.75
	21D			20	6.69
	21D			21	8.22
CCV				22	10.30

TOC Instrument: #1 - SN: 241N8102003  
 (Circle one) #2 - SN: 241N9041221

Date: \_\_\_\_\_  
 Analyst: \_\_\_\_\_  
 2° Review: \_\_\_\_\_

CCV ID: \_\_\_\_\_  
 SRM 1944 ID: \_\_\_\_\_  
 Filter Aid ID: \_\_\_\_\_

#3 - SN: 241L1308211

ICV ID: \_\_\_\_\_  
 Balance ID: \_\_\_\_\_  
 Other SRM ID: \_\_\_\_\_

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor					
Blank					
K Factor					
K Factor					
ICV					
ICB					
LCS					
Blank					
L1623546 02				45	16.38
CCV				46	10.33
CCB				47	34.93
L1623546 02RR				48	16.16
02RR				49	9.41
01				50	14.56
01				51	17.22
L1623942 01				52	21.90
CCV				53	11.25
CCB MB				54	92.41
L1623942 02				55	12.04
02				56	12.67

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
CCV				57	10.64
CCB				58	69.01
L1623791 05				59	9.59
05				60	13.06
06				61	10.02
06				62	18.02
07				63	8.52
07				64	14.94
08				65	22.58
08				66	11.21
09				67	11.36
09				68	17.89
CCV				69	10.74
CCB				70	87.13
L1623791 10				01	13.62
10				02	15.69
10D				03	10.04
10D				04	14.14
10MS		10.54		05	10.87
10MS		10.45		06	12.62
08RR				07	20.30
08RR				08	10.26

Document Type: Form

Pre-Qualtrax Document ID: 107-02



TOC Instrument: **#1**  
 (Circle one) #2 -

#3 - SN: 241L1308211

SN: 241N8102003

SN: 241N9041221

Date: 8/9/10  
 Analyst: CMD  
 2° Review:

CCV ID: WN051114 A-E  
 SRM 1944 ID: W5081814A  
 Filter Aid ID: WS120405A

ICV ID: WN051116 F  
 Balance ID: 005712  
 Other SRM ID:

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std				01	7.50
Blank K				02	10.35
K Factor Blank				03	58.49
Blank K				04	10.20
K Factor				05	10.32
K Factor <del>EB</del>				06	62.69
ICV 10000				07	10.30
ICV 1000				08	10.41
ICV 5000				09	10.38
Blank 10000				10	10.51
20000				11	10.82
40000				12	11.20
ICV				13	10.60
ICB				14	10.72
HICV				15	52.19
SRM				16	13.84
MB				17	63.03
SRM				18	7.86
CCV MB				19	53.51
CCB L1623549	05			20	9.60
	05			21	10.86
	06			22	14.03

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
L1623549	06			23	12.48
	07			24	13.78
CCV	07			25	16.28
CCB				26	10.58
L1623549	09			27	81.07
	09			28	12.31
	10			29	12.86
CCV	10			30	9.76
CCB	10			31	11.31
	18			32	12.29
	18			33	20.03
	19			34	15.68
	19			35	16.75
	19D			36	14.40
	19D			37	15.60
CCV				38	10.30
CCB				39	86.44
	19MS	10.04		40	20.49
	19MS	10.73		41	16.33
CCV				42	10.21
CCB				43	62.31
L1623549	04			44	5.66

TOC Instrument: #1 - SN: 241N8102003 #3 - SN: 241L1308211  
(Circle one) #2 - SN: 241N9041221

Date: 8/9/16  
Analyst:   
ICV ID:   
Balance ID:   
Other SRM ID:   
SRM 1944 ID:   
Filter Aid ID:   
2° Review:   
Date: 8/9/16

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor					
Blank 11623549	04			45	6.38
K Factor 1	08			46	5.29
K Factor	08			47	10.65
16V	11			48	6.58
16B	11			49	8.65
16S	03			50	9.09
Blank	03			51	9.84
	02			52	12.88
	02			53	10.25
CCV				54	10.35
CCB				55	61.91
11623549	01			56	10.61
	01			57	15.16
11623546	05			58	11.16
	05			59	10.62
CCV	016			60	15.37
CCB	016			61	10.19
	17			62	7.76
	17			63	5.29

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
11623546	18			64	5.68
	18			65	6.31
CCV				66	10.19
CCB				67	52.02
11623546	19			68	10.62
	19			69	9.17
CCV				70	10.25
CCB				71	86.47
GCV 11623791	17			01	8.10
CCB	17			02	8.57
	18			03	10.93
	18			04	7.85
	19			05	11.65
	19			06	5.79
	20			07	16.79
	20			08	16.31
	20D			09	6.97
	20D			10	14.50
CCV				11	10.49
CCB				12	39.70
GCV SRM	20MS	16.54		13	13.61
CCB SRM	20MS	10.53		14	15.49





# Alpha Report





## ANALYTICAL REPORT

Lab Number:	L1623546
Client:	AMEC Foster Wheeler E & I, Inc. 511 Congress Street P.O. Box 7050 Portland, ME 04112-7050
ATTN:	Rod Pendleton
Phone:	(207) 828-3692
Project Name:	PENOBSCOT RIVER ESTUARY
Project Number:	3616166052
Report Date:	08/16/16

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320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1623546-01	W-61-HIGH_072716_SED_03	SEDIMENT	Not Specified	07/27/16 09:20	07/29/16
L1623546-02	W-61-INTERTIDAL-072716_SED_03	SEDIMENT	Not Specified	07/27/16 10:00	07/29/16
L1623546-03	W-61-LOW_072716_SED_03	SEDIMENT	Not Specified	07/27/16 09:40	07/29/16
L1623546-04	W-61-MID_072716_SED_03	SEDIMENT	Not Specified	07/27/16 09:30	07/29/16
L1623546-05	W-63-HIGH_072116_SED_03	SEDIMENT	Not Specified	07/21/16 11:10	07/29/16
L1623546-06	W-63-HIGH_072116_SED_03_DUP	SEDIMENT	Not Specified	07/21/16 11:10	07/29/16
L1623546-07	W-63-INTERTIDAL_072616_SED_03	SEDIMENT	Not Specified	07/26/16 13:00	07/29/16
L1623546-08	W-63-LOW_072616_SED_03	SEDIMENT	Not Specified	07/26/16 12:50	07/29/16
L1623546-09	W-63-MID_072616_SED_03	SEDIMENT	Not Specified	07/26/16 12:40	07/29/16
L1623546-10	W-65-HIGH_072516_SED_03	SEDIMENT	Not Specified	07/25/16 15:30	07/29/16
L1623546-11	W-65-INTERTIDAL_072516_SED_03	SEDIMENT	Not Specified	07/25/16 16:10	07/29/16
L1623546-12	W-65-LOW_072516_SED_03	SEDIMENT	Not Specified	07/25/16 15:50	07/29/16
L1623546-13	W-65-MID_072516_SED_03	SEDIMENT	Not Specified	07/25/16 15:40	07/29/16
L1623546-14	ES-15_072716_SED_03	SEDIMENT	Not Specified	07/27/16 14:50	07/29/16
L1623546-15	SVE-01_072716_SED_03	SEDIMENT	Not Specified	07/27/16 10:50	07/29/16
L1623546-16	OL-01_072716_SED_03	SEDIMENT	Not Specified	07/27/16 14:30	07/29/16
L1623546-17	W17-N_072116_SED_03	SEDIMENT	Not Specified	07/21/16 10:20	07/29/16
L1623546-18	ADD-01_072116_SED_03	SEDIMENT	Not Specified	07/21/16 14:15	07/29/16
L1623546-19	ADD-02_072216_SED_03	SEDIMENT	Not Specified	07/22/16 16:44	07/29/16
L1623546-20	W-17-LOW_072616_SED_03_DUP	SEDIMENT	Not Specified	07/26/16 14:45	07/29/16
L1623546-21	BO-04-02_072616_SED_03	SEDIMENT	Not Specified	07/26/16 10:15	07/29/16
L1623546-22	BO-04-	SEDIMENT	Not Specified	07/26/16 10:15	07/29/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
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02\_072616\_SED\_03\_DUP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**Case Narrative (continued)**

Report Submission


All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Total Organic Carbon

The WG921544-5 MS recovery for (Rep2 - 140%) , performed on L1623546-21, does not apply because the sample concentration is greater than four times the spike amount added.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 08/16/16

# **INORGANICS & MISCELLANEOUS**

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-01  
**Client ID:** W-61-HIGH\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 09:20  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.22		%	0.050	0.050	1	-	08/09/16 13:53	13,-	CM
Total Organic Carbon (Rep2)	2.46		%	0.050	0.050	1	-	08/09/16 13:53	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	67.8		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP





**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-02  
**Client ID:** W-61-INTERTIDAL-072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 10:00  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	3.28		%	0.050	0.050	1	-	08/09/16 13:43	13,-	CM
Total Organic Carbon (Rep2)	3.49		%	0.050	0.050	1	-	08/09/16 13:43	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	47.6		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-03  
**Client ID:** W-61-LOW\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 09:40  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	1.99		%	0.050	0.050	1	-	08/09/16 13:05	13,-	CM
Total Organic Carbon (Rep2)	1.98		%	0.050	0.050	1	-	08/09/16 13:05	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	58.7		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-04  
**Client ID:** W-61-MID\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 09:30  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	1.41		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	1.50		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	65.6		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-05  
**Client ID:** W-63-HIGH\_072116\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/21/16 11:10  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.17		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	1.96		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	63.9		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-06  
**Client ID:** W-63-HIGH\_072116\_SED\_03\_DUP  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/21/16 11:10  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	1.64		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	1.37		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	69.7		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-07  
**Client ID:** W-63-INTERTIDAL\_072616\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 13:00  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	7.29		%	0.050	0.050	1	-	08/09/16 12:46	13,-	CM
Total Organic Carbon (Rep2)	7.54		%	0.050	0.050	1	-	08/09/16 12:46	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	25.5		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-08  
**Client ID:** W-63-LOW\_072616\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 12:50  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	6.53		%	0.050	0.050	1	-	08/09/16 12:36	13,-	CM
Total Organic Carbon (Rep2)	6.53		%	0.050	0.050	1	-	08/09/16 12:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	28.8		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-09  
**Client ID:** W-63-MID\_072616\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 12:40  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.42		%	0.050	0.050	1	-	08/09/16 11:50	13,-	CM
Total Organic Carbon (Rep2)	2.17		%	0.050	0.050	1	-	08/09/16 11:50	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	55.8		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP





**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-10  
**Client ID:** W-65-HIGH\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 15:30  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	15.1		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	15.5		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	15.1		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-11  
**Client ID:** W-65-INTERTIDAL\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 16:10  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	0.514		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	0.402		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	72.6		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-12  
**Client ID:** W-65-LOW\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 15:50  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.40		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	2.41		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	63.7		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-13  
**Client ID:** W-65-MID\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 15:40  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	26.1		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	25.9		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	16.2		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-14  
**Client ID:** ES-15\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 14:50  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	3.30		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	2.60		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	45.9		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-15  
**Client ID:** SVE-01\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 10:50  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.59		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	2.52		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	50.0		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-16  
**Client ID:** OL-01\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 14:30  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	1.54		%	0.050	0.050	1	-	08/09/16 11:40	13,-	CM
Total Organic Carbon (Rep2)	2.04		%	0.050	0.050	1	-	08/09/16 11:40	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	56.0		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-17  
**Client ID:** W17-N\_072116\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/21/16 10:20  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	15.9		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	15.3		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	20.1		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP





**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-18  
**Client ID:** ADD-01\_072116\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/21/16 14:15  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	20.4		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	20.8		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	12.6		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-19  
**Client ID:** ADD-02\_072216\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/22/16 16:44  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.75		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	2.58		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	37.6		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-20  
**Client ID:** W-17-LOW\_072616\_SED\_03\_DUP  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 14:45  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.10		%	0.050	0.050	1	-	08/09/16 11:30	13,-	CM
Total Organic Carbon (Rep2)	2.20		%	0.050	0.050	1	-	08/09/16 11:30	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	49.0		%	0.100	0.100	1	-	08/01/16 11:20	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-21  
**Client ID:** BO-04-02\_072616\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 10:15  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	7.77		%	0.050	0.050	1	-	08/09/16 10:42	13,-	CM
Total Organic Carbon (Rep2)	7.18		%	0.050	0.050	1	-	08/09/16 10:42	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	23.7		%	0.100	0.100	1	-	08/01/16 11:25	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623546-22  
**Client ID:** BO-04-02\_072616\_SED\_03\_DUP  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 10:15  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	9.12		%	0.050	0.050	1	-	08/09/16 10:32	13,-	CM
Total Organic Carbon (Rep2)	8.90		%	0.050	0.050	1	-	08/09/16 10:32	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	23.4		%	0.100	0.100	1	-	08/01/16 11:25	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab for sample(s): 10-15 Batch: WG921180-1</b>									
Total Organic Carbon (Rep1)	ND	%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	ND	%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>Total Organic Carbon - Mansfield Lab for sample(s): 01-03,07-09,16,20-22 Batch: WG921544-1</b>									
Total Organic Carbon (Rep1)	ND	%	0.050	0.050	1	-	08/09/16 10:16	13,-	CM
Total Organic Carbon (Rep2)	ND	%	0.050	0.050	1	-	08/09/16 10:16	13,-	CM
<b>Total Organic Carbon - Mansfield Lab for sample(s): 04-06,17-19 Batch: WG921994-1</b>									
Total Organic Carbon (Rep1)	ND	%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	ND	%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 10-15 QC Batch ID: WG921180-4 WG921180-5 QC Sample: L1623549-14 Client ID: MS Sample												
Total Organic Carbon (Rep1)	6.68	0.903	8.28	177	Q	8.67	117		75-125	5		25
Total Organic Carbon (Rep2)	7.52	0.908	8.10	64	Q	8.40	73	Q	75-125	4		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-03,07-09,16,20-22 QC Batch ID: WG921544-4 WG921544-5 QC Sample: L1623546-21 Client ID: BO-04-02_072616_SED_03												
Total Organic Carbon (Rep1)	7.77	1.74	9.50	99		9.60	106		75-125	1		25
Total Organic Carbon (Rep2)	7.18	1.84	9.18	109		9.40	140	Q	75-125	2		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 04-06,17-19 QC Batch ID: WG921994-4 QC Sample: L1623549-19 Client ID: MS Sample												
Total Organic Carbon (Rep1)	11.1	0.49	12.4	265	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	11.6	0.657	12.5	137	Q	-	-		75-125	-		25

## Lab Duplicate Analysis

### Batch Quality Control

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG918872-1 QC Sample: L1623546-01 Client ID: W-61-HIGH_072716_SED_03						
Solids, Total	67.8	62.3	%	8		10
General Chemistry - Mansfield Lab Associated sample(s): 21-22 QC Batch ID: WG918950-1 QC Sample: L1623546-21 Client ID: BO-04-02_072616_SED_03						
Solids, Total	23.7	24.6	%	4		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 10-15 QC Batch ID: WG921180-3 QC Sample: L1623549-14 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	6.68	7.11	%	6		25
Total Organic Carbon (Rep2)	7.52	6.77	%	10		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-03,07-09,16,20-22 QC Batch ID: WG921544-3 QC Sample: L1623546-21 Client ID: BO-04-02_072616_SED_03						
Total Organic Carbon (Rep1)	7.77	7.28	%	7		25
Total Organic Carbon (Rep2)	7.18	7.50	%	4		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 04-06,17-19 QC Batch ID: WG921994-3 QC Sample: L1623549-19 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	11.1	11.7	%	5		25
Total Organic Carbon (Rep2)	11.6	11.8	%	2		25



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

### S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG921180-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	115		75-125
Total Organic Carbon (Rep2)	104		75-125

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

### S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG921544-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	96		75-125
Total Organic Carbon (Rep2)	104		75-125

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

### S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG921994-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	103		75-125
Total Organic Carbon (Rep2)	95		75-125

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Present/Intact

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1623546-01A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-02A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-03A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-04A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-05A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-06A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-07A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-08A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-09A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-10A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-11A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-12A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-13A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-14A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-15A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-16A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-17A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-18A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-19A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-20A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623546-21A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)

\*Values in parentheses indicate holding time in days



**Project Name:** PENOBSCOT RIVER ESTUARY**Project Number:** 3616166052**Lab Number:** L1623546**Report Date:** 08/16/16**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1623546-22A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)

\*Values in parentheses indicate holding time in days



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623546  
**Report Date:** 08/16/16

## REFERENCES

- 13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.





## Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

**EPA 624:** m/p-xylene, o-xylene

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L1623546

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<i>Samp #</i>	<i>Sample Date</i>	<i>Sample Time</i>	<i>Field Sample ID</i>	<i>QC Code</i>	<i>Qty Total</i>	<i>Qty Each</i>	<i>Bottle Size and Material</i>	<i>Preservative</i>	<i>Media Method</i>	<i>Fraction</i>
.01	1563	7/27/2016	9:20	W-61-High_072716_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.02	1564	7/27/2016	10:00	W-61-Intertidal_072716_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.03	1565	7/27/2016	9:40	W-61-Low_072716_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.04	1566	7/27/2016	9:30	W-61-Mid_072716_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.05	1567	7/21/2016	11:10	W-63-High_072116_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.06	1568	7/21/2016	11:10	W-63-High_072116_SED_03_DUP	1					
				FD	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.07	1569	7/26/2016	13:00	W-63-Intertidal_072616_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.08	1570	7/26/2016	12:50	W-63-Low_072616_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.09	1571	7/26/2016	12:40	W-63-Mid_072616_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.10	1572	7/25/2016	15:30	W-65-High_072516_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
.11	1573	7/25/2016	16:10	W-65-Intertidal_072516_SED_03	1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T

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<i>Samp #</i>	<i>Sample Date</i>	<i>Sample Time</i>	<i>Field Sample ID</i>	<i>QC Code</i>	<i>Qty Total</i>	<i>Qty Each</i>	<i>Bottle Size and Material</i>	<i>Preservative</i>	<i>Media Method</i>	<i>Fraction</i>
1574	7/25/2016	15:50	W-65-Low_072516_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1575	7/25/2016	15:40	W-65-Mid_072516_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1577	7/27/2016	14:50	ES-15_072716_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1583	7/27/2016	10:50	SVE-01_072716_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1585	7/27/2016	14:30	OL-01_072716_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1587	7/21/2016	10:20	W17-N_072116_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1588	7/21/2016	14:15	ADD-01_072116_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1602	7/22/2016	16:44	ADD-02_072216_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1603	7/26/2016	14:45	W-17-Low_072616_SED_03_DUP		1					
				FD	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1607	7/26/2016	10:15	BO-04-02_072616_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T
1610	7/26/2016	10:15	BO-04-02_072616_SED_03_DUP		0					
				FD	0	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T

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Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media Method	Fraction
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QC Codes: FS = Field Sample, EB = Equipment Rinsate Blank, MS - Matrix Spike, MSD = Matrix Spike Duplicate

Relinquished: Matthew Matti Date: 07 / 28 / 2016 Time: 1400

Received: Guest AM Date: 7 / 29 / 16 Time: 10:18

Relinquished AK 7/29/16 14:45 Rec: Kim O'Brien 7/29/16 14:45

AIRBILL: 8045 4405 6908

- ONE COOLER



[www.alphalab.com](http://www.alphalab.com)



Lab Number: L1623549

Client: AMEC Foster Wheeler E & I, Inc.

ATTN: Rod Pendleton

Project Name: PENOBSCOT RIVER ESTUARY

Project Number: 3616166052

*The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.*

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# **Sample Delivery Group Information**



# Sample Delivery Group Form

Laboratory Job number: L1623549

Project Manager: Elizabeth Porta

Review Date: 08/01/2016

Project Number: 3616166052

Project Name: PENOBSCOT RIVER ESTUARY

Received: 07/29/2016 10:18

Client Account: AMEC Foster Wheeler E & I, Inc.

Received by: KB

Samples Delivered by: FEDEX

Call Tracker #

Bill Of Laden Yes

Trackingnum 804544056908

Coc Present Present

Container Status Intact

Sample IDs rec'd in MF at 3.5c (9849)

All Containers Accounted For? Yes

Were Extra Samples Received? No

Do Sample Labels and COC agree? Yes

Are Samples in Appropriate Containers? Yes

Are Samples Received within Holding time? Yes

pH of Samples upon Receipt N/A

Are samples Properly Preserved? Yes

Initial pH preserved in house with

Final pH

Other Issues

Chlorine Check N/A

Are VOA/VPH Vials Present? No

Aqueous: Do Vials Contain Head Space? N/A

Soils: Is MeOH Covering the Soil? N/A

Reagent H2O Preserved vials Frozen on N/A

Frozen by Client N/A

Cooler	Seal	Ice Present	Blue Ice Present	Temp. (Celsius)	Frozen upon Receipt	Delivered Direct from Site
A	Present/Intact	Yes	No	2.5 - IR Gun	No	No



# **LIMS Chain of Custody**



ALPHA ANALYTICAL LABORATORIES, INC.  
LOGIN CHAIN OF CUSTODY REPORT  
Aug 16 2016, 09:51 pm

Login Number: L1623549

Account: AMEC-ME AMEC Foster Wheeler E & I, Inc. Project: 3616166052

Sample #      Client ID      Received: 29JUL16      Due Date: 19AUG16  
   Mat PR Collected      Container

L1623549-01 OV-04\_072216\_SED\_03 3 S0 22JUL16 09:35 1-Glass-A.06

| DPKG-FULL Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS,DPKG-FULL

L1623549-02 OV-01\_072216\_SED\_03 3 S0 22JUL16 11:22 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-03 OV-02\_072216\_SED\_03 3 S0 22JUL16 10:33 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-04 BO-05\_072016\_SED\_03 3 S0 20JUL16 14:00 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-05 OB-05\_072616\_SED\_03 3 S0 26JUL16 12:00 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-06 ES-02\_072716\_SED\_03 3 S0 27JUL16 08:50 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-07 ES-13\_072716\_SED\_03 3 S0 27JUL16 11:30 1-Glass-A.06

| Package Due Date: 08/19/16

ALPHA ANALYTICAL LABORATORIES, INC.  
LOGIN CHAIN OF CUSTODY REPORT  
Aug 16 2016, 09:51 pm

Login Number: L1623549

Account: AMEC-ME AMEC Foster Wheeler E & I, Inc. Project: 3616166052

Sample #      Client ID      Received: 29JUL16      Due Date: 19AUG16  
   Mat PR Collected      Container

A2-TOC-LK-2REPS,A2-TS

L1623549-08 W-17-HIGH\_072116\_SE 3 S0 21JUL16 09:25 1-Glass-A.06  
| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-09 W-17-INTERTIDAL\_072 3 S0 26JUL16 14:30 1-Glass-A.06  
| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-10 W-17-LOW\_072616\_SED 3 S0 26JUL16 14:45 1-Glass-A.06  
| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-11 W-17-MID\_072116\_SED 3 S0 21JUL16 10:00 1-Glass-A.06  
| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-12 W-21-HIGH\_072516\_SE 3 S0 25JUL16 13:40 1-Glass-A.06  
| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-13 W-21-INTERTIDAL\_072 3 S0 25JUL16 14:45 1-Glass-A.06  
| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

ALPHA ANALYTICAL LABORATORIES, INC.  
LOGIN CHAIN OF CUSTODY REPORT  
Aug 16 2016, 09:51 pm

Login Number: L1623549

Account: AMEC-ME AMEC Foster Wheeler E & I, Inc. Project: 3616166052

Sample #      Client ID      Received: 29JUL16      Due Date: 19AUG16  
   Mat PR Collected      Container

L1623549-14 W-21-LOW\_072516\_SED 3 S0 25JUL16 14:05 1-Glass-A.06

L1623549-14 MS L1623549-14 MSD Package Due Date: 08/19/16

A2-MS/MSD,A2-TOC-LK-2REPS,A2-TS

L1623549-15 W-21-MID\_072516\_SED 3 S0 25JUL16 15:00 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-16 W-21UM-CENTRAL-C\_07 3 S0 27JUL16 11:47 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-17 W-21UM-EAST-C\_07251 3 S0 25JUL16 13:50 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-18 W-21UM-SOUTH\_072716 3 S0 27JUL16 10:08 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

L1623549-19 W-21UM-WEST-A\_07/27 3 S0 27JUL16 11:02 1-Glass-A.06

| Package Due Date: 08/19/16

A2-TOC-LK-2REPS,A2-TS

# Container Tracking



**ALPHA ANALYTICAL LABORATORIES**  
**Container Tracking Report**

Container ID	Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1623549-01A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623549-01A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623549-01A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-01A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-01A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-01A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-02A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623549-02A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623549-02A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-02A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-02A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-02A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-03A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623549-03A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623549-03A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-03A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-03A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-03A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-04A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623549-04A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623549-04A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-04A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-04A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-04A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-05A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel

Container ID	Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1623549-05A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-05A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-05A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-06A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-06A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-06A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-06A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-07A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-07A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-07A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-07A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-08A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623549-08A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623549-08A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-08A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-08A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-08A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-09A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-09A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-09A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-09A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-10A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-10A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-10A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-10A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read

Container ID	Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1623549-11A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623549-11A	Glass-A.06	INTACT	08-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623549-11A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-11A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-11A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-11A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-12A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-12A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-12A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-12A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-13A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-13A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-13A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-13A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-14A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-14A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-14A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-14A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-15A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-15A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-15A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-15A	Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-16A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-16A	Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-16A	Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey



Container ID Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1623549-16A Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-17A Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-17A Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-17A Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-17A Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-18A Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-18A Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-18A Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-18A Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623549-19A Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623549-19A Glass-A.06	INTACT	01-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623549-19A Glass-A.06	INTACT	29-JUL-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623549-19A Glass-A.06	INTACT	29-JUL-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read

# Communications

# Call Tracker Report

Call # 86508

Call #: 86508  
Call Date: 08/01/16 16:38  
Status: NEED  
Date: 08/01/16 16:38  
Operator: LPORTA  
Type: Live

Contact: Denise King  
Company: AMEC Foster Wheeler E & I, Inc.  
Acct #: AMEC-ME  
Project #: 3616166052  
Client Proj: PENOBSCOT RIVER ESTUARY  
Login #: L1623549

## *Call Details*

King, Denise  
Attachments 4:30 PM (8 minutes ago)

to me  
Could we add MS/MD to sample -14 W-21-Low\_072516\_SED\_03?

Denise King  
Senior Environmental Chemist, Environment & Infrastructure, Amec Foster Wheeler  
T +1 978 392 5339  
M +1 508 789 1738  
Denise.king@amecfw.com

# Chain of Custody



# Chain Of Custody/Analysis Request Form

**USDC - Penobscot River**

**Lab: Alpha**

**L1623549**

AMEC, Suite 200, 511 Congress Street, Portland, ME

Tech Lead - Louise Venne  
Work# 770-421-3461

Proj Chemist - Denise King  
508-789-1738

AMEC Job Number = 3616166052

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media	Method	Fraction
23549 .01	1534	7/22/2016	9:35	OV-04_072216_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.02	1535	7/22/2016	11:22	OV-01_072216_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.03	1536	7/22/2016	10:33	OV-02_072216_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.04	1537	7/20/2016	14:00	BO-05_072016_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.05	1538	7/26/2016	12:00	OB-05_0072616_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.06	1540	7/27/2016	8:50	ES-02_072716_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.07	1541	7/27/2016	11:30	ES-13_072716_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.08	1548	7/21/2016	9:25	W-17-High_072116_SED_03		1					
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

Thursday, July 28, 2016

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23549

<i>Samp #</i>	<i>Sample Date</i>	<i>Sample Time</i>	<i>Field Sample ID</i>	<i>QC Code</i>	<i>Qty Total</i>	<i>Qty Each</i>	<i>Bottle Size and Material</i>	<i>Preservative</i>	<i>Media</i>	<i>Method</i>	<i>Fraction</i>
.09	1549	7/26/2016	14:30	W-17-Intertidal_072616_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.10	1550	7/26/2016	14:45	W-17-Low_072616_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.11	1551	7/21/2016	10:00	W-17-Mid_072116_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.12	1552	7/25/2016	13:40	W-21-High_072516_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.13	1553	7/25/2016	14:45	W-21-Intertidal_072516_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.14	1554	7/25/2016	14:05	W-21-Low_072516_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.15	1558	7/25/2016	15:00	W-21-Mid_072516_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.16	1559	7/27/2016	11:47	W-21UM-Central-C_072716_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.17	1560	7/25/2016	13:50	W-21UM-East-C_072516_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.18	1561	7/27/2016	10:08	W-21UM-South_072716_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.19	1562	7/27/2016	11:02	W-21UM-West-A_07/27/16_SED_03	1						
				FS		1 2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

Thursday, July 28, 2016

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Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media Method	Fraction
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QC Codes: FS = Field Sample, EB = Equipment Rinsate Blank, MS - Matrix Spike, MSD = Matrix Spike Duplicate

Relinquished: Matthew Matti Date: 07 / 28 / 2016 Time: 1400

Received: Guest AM Date: 7 / 29 / 16 Time: 10:18

Relinquished AK 7/29/16 14:45 Rec: Kim O'Beirne 7/29/16 14:45

AIRBILL: 8045 4405 6908

- ONE COOLER

# Wet Chemistry





# **Total Solids / Percent Moisture Analysis**

# Sample Raw Data

ALPHA ANALYTICAL LABS  
**WET CHEMISTRY DEPARTMENT**  
 PERCENT TOTAL SOLIDS

Last Change 3/26/13
File A2-TS_S.xlt

Sample Number: \_\_\_\_\_

Client: \_\_\_\_\_

Analysis: %TOTAL SOLIDS  
 in solids

Method: STM 2540-G

Product: A2-TS  
 Analyte: Solids, Total  
 Analysis Date: 8/1/2016 11:05  
 Technician: SP  
 Work group: WG918874  
 MDL: 0.10%  
 Scale Serial#: 14621307

-----105 degrees C -----

	Sample Number	Tare Weight (gm)	Gross Weight (gm)	Net Weight(1) (gm)	Net Weight(2) (gm)	Net Weight(3) (gm)	Net Weight(4) (gm)	Net Weight(5) (gm)	RESULT %
DUP	WG918874-1	1.17	7.99	6.5	6.5				78.15
	L1623549-01	1.19	8.15	6.58	6.61				77.44
	L1623549-02	1.17	6.34	5.78	5.79				89.17
	L1623549-03	1.17	7.07	3.54	3.55				40.17
	L1623549-04	1.18	7.1	2.4	2.42				20.61
	L1623549-05	1.19	6.48	3.06	3.07				35.35
	L1623549-06	1.18	9.46	3.97	3.98				33.70
	L1623549-07	1.18	8.49	4.75	4.76				48.84
	L1623549-08	1.19	7.27	3.09	3.1				31.25
	L1623549-09	1.18	10.83	7.18	7.18				62.18
	L1623549-10	1.18	9.09	4.93	4.95				47.41
	L1623549-11	1.18	6.7	3.74	3.76				46.38
	L1623549-12	1.16	9.27	3.33	3.34				26.76
	L1623549-13	1.17	8.18	4.13	4.14				42.23
	L1623549-14	1.18	9.66	5.04	5.06				45.52
	L1623549-15	1.17	11.58	5.27	5.28				39.39
	L1623549-16	1.17	6.78	2.32	2.33				20.50
	L1623549-17	1.17	6.67	2.94	2.95				32.18
	L1623549-18	1.16	7.39	2.71	2.72				24.88
	L1623549-19	1.17	6.73	1.97	1.98				14.39

Comments:

# **Work Group**

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 02 2016, 02:40 pm

Work Group: WG918874 for Department: 7 Wet Chemistry

Created: 01-AUG-16 Due: Operator: SP

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623549-01	OV-04_072216_SED_03	S A2-TS	SOIL	DONE	U	0729	0819	S0	Glass-A.06
L1623549-02	OV-01_072216_SED_03	S A2-TS	SOIL	DONE	U	0729	0819	S0	Glass-A.06
L1623549-03	OV-02_072216_SED_03	S A2-TS	SOIL	DONE	U	0729	0819	S0	Glass-A.06
L1623549-04	BO-05_072016_SED_03	S A2-TS	SOIL	DONE	U	0727	0819	S0	Glass-A.06
L1623549-05	OB-05_072616_SED_03	S A2-TS	SOIL	DONE	U	0802	0819	S0	Glass-A.06
L1623549-06	ES-02_072716_SED_03	S A2-TS	SOIL	DONE	U	0803	0819	S0	Glass-A.06
L1623549-07	ES-13_072716_SED_03	S A2-TS	SOIL	DONE	U	0803	0819	S0	Glass-A.06
L1623549-08	W-17-HIGH_072116_SED	S A2-TS	SOIL	DONE	U	0728	0819	S0	Glass-A.06
L1623549-09	W-17-INTERTIDAL_0726	S A2-TS	SOIL	DONE	U	0802	0819	S0	Glass-A.06
L1623549-10	W-17-LOW_072616_SED_	S A2-TS	SOIL	DONE	U	0802	0819	S0	Glass-A.06
L1623549-11	W-17-MID_072116_SED_	S A2-TS	SOIL	DONE	U	0728	0819	S0	Glass-A.06
L1623549-12	W-21-HIGH_072516_SED	S A2-TS	SOIL	DONE	U	0801	0819	S0	Glass-A.06
L1623549-13	W-21-INTERTIDAL_0725	S A2-TS	SOIL	DONE	U	0801	0819	S0	Glass-A.06
L1623549-14	W-21-LOW_072516_SED_	S A2-TS	SOIL	DONE	U	0801	0819	S0	Glass-A.06
L1623549-15	W-21-MID_072516_SED_	S A2-TS	SOIL	DONE	U	0801	0819	S0	Glass-A.06
L1623549-16	W-21UM-CENTRAL-C_072	S A2-TS	SOIL	DONE	U	0803	0819	S0	Glass-A.06
L1623549-17	W-21UM-EAST-C_072516	S A2-TS	SOIL	DONE	U	0801	0819	S0	Glass-A.06
L1623549-18	W-21UM-SOUTH_072716_	S A2-TS	SOIL	DONE	U	0803	0819	S0	Glass-A.06
L1623549-19	W-21UM-WEST-A_07/27/	S A2-TS	SOIL	DONE	U	0803	0819	S0	Glass-A.06
WG918874-1	Duplicate Sample	S A2-TS	SOIL	DONE	U				

Comments:

WG918874-1 L1623549-01

# **Organic Carbon Analysis**

# Sequence Logs

Date of report: 8/9/2016 9:40 AM  
 User ID: mansfield toc1

Run	Run Details			Results				Signals				
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR		
K1	1	10.120	8/8/2016 9:30:29 AM	14.071	24.040	1.824	1497	1892	3178	17466		
BLANK	2		8/8/2016 9:35:40 AM	51	3166	756	1503	1583	1900	15788		
0	3	10.050	8/8/2016 9:40:45 AM	-0.028%	4.574%	-1.881%	1499	1530	2739	15299		
1000	4	10.040	8/8/2016 9:45:45 AM	0.082%	4.697%	-8.672%	1500	1533	2772	15175		
5000	5	10.400	8/8/2016 9:50:46 AM	0.495%	4.516%	-10.381%	1502	1589	2823	15147		
10000	6	10.100	8/8/2016 9:55:47 AM	0.999%	4.582%	-11.379%	1502	1655	2872	15132		
20000	7	10.440	8/8/2016 10:00:48 AM	2.023%	4.432%	-11.437%	1502	1805	3022	15125		
40000	8	10.600	8/8/2016 10:25:28 AM	3.955%	4.291%	-10.889%	1498	2086	3283	15095		
ICV	9	10.200	8/8/2016 10:36:48 AM	0.984%	4.528%	-12.243%	1500	1651	2865	15096		
MB	10	74.180	8/8/2016 10:41:50 AM	-0.001%	0.076%	-1.704%	1501	1513	1716	15102		
HICV	11	52.020	8/8/2016 10:49:28 AM	3.959%	0.921%	-2.334%	1500	4327	5585	15104		
SRM1944	12	7.550	8/8/2016 11:04:06 AM	5.048%	8.927%	-8.830%	1499	2045	3789	15202		
MB	13	64.110	8/8/2016 11:09:12 AM	0.002%	0.995%	-1.862%	1502	1518	3172	15124		
SRM1944	14	8.370	8/8/2016 11:14:17 AM	4.550%	1.801%	-8.797%	1504	2048	2486	15236		
MB	15	74.650	8/8/2016 11:19:22 AM	0.002%	0.066%	-1.633%	1501	1517	1701	15109		
162354610	16	15.57	8/8/2016 11:42:37 AM	11.997%	3.084%	21.504%	1498	4807	6073	15999		
162354610	17	13.09	8/8/2016 11:47:40 AM	15.827%	3.285%	19.863%	1500	4344	5484	15874		
162354611	18	19.26	8/8/2016 11:52:43 AM	0.504%	0.464%	-5.482%	1502	1653	1940	15150		
162354611	19	18.62	8/8/2016 11:57:45 AM	0.393%	0.352%	-5.828%	1501	1618	1845	15134		
162354612	20	19.38	8/8/2016 12:02:48 PM	2.371%	0.743%	-2.346%	1501	2162	2585	15260		
162354612	21	12.15	8/8/2016 12:07:51 PM	2.375%	0.764%	-5.657%	1499	1940	2246	15192		
CCV	22	10.610	8/8/2016 12:12:53 PM	0.988%	4.577%	-11.723%	1500	1657	2931	15096		
CCB	23	89.250	8/8/2016 12:17:56 PM	0.0%	0.039%	-1.416%	1503	1515	1664	15118		
162354613	24	8.26	8/8/2016 12:24:46 PM	29.560%	4.319%	21.612%	1500	4507	5440	15700		
162354613	25	9.44	8/8/2016 12:29:48 PM	26.326%	4.464%	24.163%	1502	4977	6089	15827		
162354614	26	11.53	8/8/2016 12:34:47 PM	3.255%	0.848%	-7.700%	1503	2040	2348	15194		



Reported on 8/9/2016 9:40 AM by mansfield\_toc1

Run	Run Details			Results					Signals				
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR			
162354614	27 <del>15</del> <sup>50</sup>	15:640	8/8/2016 12:39:47 PM	2.558%	0.635%	-5.281%	1501	2070	2379	15194			
162354615	28 <del>11</del> <sup>04</sup>	14:120	8/8/2016 12:44:47 PM	3.979%	0.829%	-7.874%	1501	2111	2403	15178			
162354615	29 <del>6</del> <sup>82</sup>	6:070	8/8/2016 12:49:47 PM	2.589%	0.578%	-15.642%	1500	1760	1921	15134			
162354912	30 <del>1</del> <sup>81</sup>	7:930	8/8/2016 12:54:46 PM	9.609%	1.755%	-3.325%	1501	2574	2984	15299			
162354912	31 <del>11</del> <sup>68</sup>	9:440	8/8/2016 12:59:45 PM	9.742%	1.870%	-4.22%	1500	2794	3297	15341			
162354913	32 <del>15</del> <sup>55</sup>	15:510	8/8/2016 1:04:45 PM	5.244%	1.151%	-8.66%	1501	2641	3149	15331			
162354913	33 <del>14</del> <sup>10</sup>	14:060	8/8/2016 1:09:44 PM	5.099%	1.130%	-1.946%	1501	2496	2955	15303			
CCV	34	10.280	8/8/2016 1:14:46 PM	0.982%	4.893%	-12.147%	1499	1651	2968	15090			
CCB	35	55.720	8/8/2016 1:19:48 PM	-0.002%	0.049%	-2.241%	1503	1514	1645	15121			
162354914	36 <del>6</del> <sup>43</sup>	6:350	8/8/2016 1:42:20 PM	6.727%	1.264%	-9.402%	1501	2111	2373	15234			
162354914	37 <del>6</del> <sup>56</sup>	6:480	8/8/2016 1:47:23 PM	7.573%	1.378%	-9.827%	1500	2196	2481	15222			
162354914D	38 <del>8</del> <sup>10</sup>	8:0	8/8/2016 1:52:29 PM	7.158%	1.305%	-5.659%	1500	2312	2635	15260			
162354914D	39 <del>5</del> <sup>07</sup>	5:040	8/8/2016 1:57:34 PM	6.894%	1.104%	-15.293%	1499	1988	2188	15184			
162354914MS	40 <del>11</del> <sup>33</sup>	11:190	8/8/2016 2:02:38 PM	8.372%	4.257%	-1.289%	1500	2810	4061	15318			
162354914MS	41 <del>11</del> <sup>36</sup>	11:220	8/8/2016 2:07:41 PM	8.158%	4.183%	-1.685%	1501	2786	4019	15321			
162354914MSD	42 <del>5</del> <sup>91</sup>	5:920	8/8/2016 2:12:44 PM	8.719%	8.177%	-12.018%	1501	2230	3500	15214			
162354914MSD	43 <del>8</del> <sup>80</sup>	8:690	8/8/2016 2:17:47 PM	8.466%	5.516%	-4.752%	1503	2538	3796	15293			
162363715	44	7.700	8/8/2016 2:22:50 PM	-0.056%	0.486%	-16.347%	1503	1511	1666	15125			
162354915	45	13.130	8/8/2016 2:27:53 PM	9.956%	2.363%	3.069%	1501	3333	4169	15439			
CCV	46	10.250	8/8/2016 2:34:53 PM	-0.034%	0.063%	-12.765%	1500	1508	1586	15084			
CCB	47	65.650	8/8/2016 2:39:55 PM	-0.01%	-0.11%	-1.932%	1500	1512	1556	15092			
CCV	48	10.0	8/8/2016 2:46:57 PM	0.899%	4.995%	-11.393%	1499	1638	2946	15112			
CCB	49	38.700	8/8/2016 2:51:59 PM	-0.02%	0.060%	-3.612%	1505	1514	1633	15111			
162354915	50 <del>14</del> <sup>44</sup>	14:300	8/8/2016 3:02:35 PM	5.889%	1.351%	-6.96%	1501	2686	3230	15334			
162354915	51 <del>11</del> <sup>05</sup>	10:940	8/8/2016 3:07:46 PM	5.749%	1.338%	-3.785%	1502	2389	2815	15286			
162354916	52 <del>12</del> <sup>60</sup>	7:440	8/8/2016 3:12:58 PM	23.276%	3.797%	23.499%	1502	3941	4705	15715			
162354916	53 <del>10</del> <sup>08</sup>	5:930	8/8/2016 3:18:11 PM	22.166%	3.671%	18.541%	1502	3358	3963	15591			

Run	Run Details				Results				Signals			
	Run #	Weight	Created on		Carbon	Hydroge	Nitrogen		ZR	CR	HR	NR
162354916	53	10.08	5:59:00	8/8/2016 3:18:11 PM	27.18	3.671%	18.541%	1502	3358	3963	15591	
162354917	54	8.85	7:30:00	8/8/2016 3:23:24 PM	6.93	1.411%	-5.588%	1501	2223	2542	15277	
162354917	55	11.51	9:52:00	8/8/2016 3:28:39 PM	6.89	1.381%	-2.456%	1500	2443	2833	15303	
162407401	56	23.380		8/8/2016 3:33:47 PM	1.432%	0.496%	-2.022%	1500	1986	2337	15248	
162407401	57	14.150		8/8/2016 3:38:55 PM	1.567%	0.467%	-6.048%	1501	1826	2052	15188	
162407402	58	10.900		8/8/2016 3:43:59 PM	2.508%	0.544%	-10.407%	1501	1890	2100	15124	
162407402	59	15.730		8/8/2016 3:49:03 PM	1.771%	0.488%	-6.547%	1500	1899	2152	15142	
CCV	60	10.340		8/8/2016 3:54:04 PM	0.938%	4.791%	-12.366%	1498	1643	2942	15069	
CCB	61	52.500		8/8/2016 4:09:34 PM	0.0%	0.039%	-2.208%	1502	1517	1630	15129	
162407403	62	14.840		8/8/2016 4:09:36 PM	14.688	0.521%	-1.978%	1500	4510	4765	15292	
162407403	63	10.330		8/8/2016 4:20:09 PM	21.819	0.639%	-4.624%	1498	4605	4832	15234	
162407404	64	6.280		8/8/2016 4:25:06 PM	29.250	2.139%	1.347%	1499	4048	4445	15351	
162407404	65	8.410		8/8/2016 4:30:01 PM	20.606	2.143%	4.082%	1499	3911	4423	15408	
162407405	66	10.310		8/8/2016 4:34:50 PM	24.039	2.926%	1.303%	1508	4934	5749	15451	
162407405	67	8.450		8/8/2016 4:39:38 PM	23.386	3.023%	-1.001%	1501	4237	4936	15341	
162407406	68	7.530		8/8/2016 4:44:27 PM	24.672	1.174%	-17.905%	1499	4047	4330	15063	
162407406	69	6.540		8/8/2016 4:49:16 PM	30.031	1.203%	-16.584%	1496	4195	4453	15088	
162407402	70	13.210		8/8/2016 4:54:05 PM	5.043%	0.452%	-9.792%	1498	2420	2631	15064	
162407402	71	11.190		8/8/2016 4:58:54 PM	4.153%	0.510%	-11.826%	1498	2145	2350	15065	
CCV	72	10.370		8/8/2016 5:03:43 PM	5.325%	4.715%	-13.241%	1498	2263	3546	15051	
CCB	73	106.90		8/8/2016 5:08:33 PM	0.114%	0.009%	-1.336%	1500	1676	1763	15059	
CCV	74	10.150		8/9/2016 7:50:41 AM	1.167%	4.687%	29.508%	1501	1762	3011	15959	
CCB	75	92.010		8/9/2016 7:57:59 AM	0.024%	0.026%	-5.355%	1502	1560	1683	15266	
162354615	76	6.03	9:70:00	8/9/2016 8:18:38 AM	2.511	0.593%	-8.976%	1499	1858	2064	15162	
162354615	77	8.18	8:24:00	8/9/2016 8:23:27 AM	2.48	0.517%	-12.740%	1500	1797	1965	15138	
162407403	78	7.700		8/9/2016 8:28:16 AM	15.616	0.563%	-9.240%	1500	3166	3336	15203	
162407403	79	5.940		8/9/2016 8:33:04 AM	21.246	0.515%	-11.558%	1502	3250	3388	15224	

Run	Run Details			Results				Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
162407403	79	5.940	8/9/2016 8:33:04 AM	21.246	0.515%	-11.558%	1502	3250	3388	15224	
162407404	80	5.530	8/9/2016 8:37:53 AM	17.557	2.026%	-5.218%	1501	2859	3201	15294	
162407404	81	6.200	8/9/2016 8:42:42 AM	14.535	1.928%	-3.771%	1501	2766	3126	15312	
CCV	82	10.260	8/9/2016 8:58:13 AM	1.517%	4.375%	-12.511%	1499	1725	2907	15080	
CCB	83	75.190	8/9/2016 9:03:03 AM	0.037%	0.024%	-1.773%	1503	1552	1659	15104	
CCV	84	10.260	8/9/2016 9:28:43 AM	1.031%	4.566%	-12.365%	1499	1657	2888	15084	
CCB	85	59.910	8/9/2016 9:33:33 AM	0.005%	0.030%	-2.275%	1502	1518	1624	15096	

Date of report: 8/10/2016 1:37 PM  
 User ID: mansfield\_toc1

Run	Run Details			Results				Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
COND	1	7.500	8/9/2016 10:34:45 AM	4.992%	9.292%	14.129%	1501	2072	3873	15565	
K1	2	10.350	8/9/2016 10:40:55 AM	16.106	32.026	-1.28	1501	1691	3420	15203	
BLANK	3		8/9/2016 10:46:55 AM	251	16838	111	1502	1538	3222	15135	
K1	4	10.200	8/9/2016 10:51:43 AM	15.176	29.558	-208	1504	1673	3251	15140	
K1	5	10.320	8/9/2016 11:09:55 AM	14.545	24.338	-193	1500	1666	2991	15117	
BLANK	6		8/9/2016 11:25:03 AM	106	3414	103	1500	1521	1863	15110	
0	7	10.300	8/9/2016 11:30:36 AM	0.0%	3.849%	-821%	1500	1517	2800	15099	
1000	8	10.410	8/9/2016 11:35:24 AM	0.082%	3.694%	-765%	1504	1533	2779	15133	
5000	9	10.380	8/9/2016 11:40:12 AM	0.453%	3.799%	-911%	1505	1591	2868	15146	
10000	10	10.510	8/9/2016 11:45:01 AM	0.911%	3.901%	-805%	1504	1662	2987	15136	
20000	11	10.820	8/9/2016 11:49:50 AM	1.766%	3.656%	-644%	1505	1805	3085	15152	
40000	12	11.200	8/9/2016 11:54:39 AM	3.642%	3.540%	-666%	1506	2126	3409	15159	
ICV	13	10.600	8/9/2016 12:01:41 PM	0.912%	3.745%	-1.314%	1503	1661	2945	15109	
ICB	14	107.20	8/9/2016 12:06:28 PM	-0.01%	0.031%	-1.44%	1504	1518	1681	15118	
HICV	15	52.190	8/9/2016 12:11:16 PM	3.674%	0.784%	-2.19%	1503	4354	5677	15122	
SRM1944	16	13.840	8/9/2016 12:28:07 PM	4.116%	4.250%	5.212%	1503	2378	4251	15287	
MB	17	63.030	8/9/2016 12:41:25 PM	-0.01%	0.252%	-1.89%	1501	1516	2066	15094	
SRM1944	18	7.860	8/9/2016 12:46:12 PM	3.784%	1.076%	4.051%	1502	1966	2289	15194	
MB	19	53.510	8/9/2016 12:51:00 PM	-0.005%	0.034%	-2.32%	1500	1512	1631	15091	
162354905	20	9.600	8/9/2016 12:55:47 PM	5.216%	1.020%	5.701%	1500	2269	2633	15220	
162354905	21	10.860	8/9/2016 1:00:35 PM	5.209%	1.001%	5.772%	1502	2369	2766	15254	
162354906	22	14.030	8/9/2016 1:05:23 PM	6.721%	1.155%	6.560%	1502	2933	3493	15314	
162354906	23	12.480	8/9/2016 1:10:11 PM	6.646%	1.140%	6.339%	1502	2762	3263	15290	
162354907	24	13.780	8/9/2016 1:14:59 PM	2.880%	0.617%	3.394%	1502	2116	2440	15224	
162354907	25	16.280	8/9/2016 1:19:46 PM	2.482%	0.531%	2.903%	1502	2127	2455	15226	
CCV	26	10.580	8/9/2016 1:24:34 PM	0.897%	3.886%	-1.035%	1502	1658	2986	15106	

Run Details				Results				Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen		ZR	CR	HR	NR
CCB	27	81.070	8/9/2016 1:29:22 PM	-0.03%	0.022%	-1.60%		1503	1515	1633	15119
162354909	28	12.310	8/9/2016 1:39:23 PM	1.450%	0.346%	1.010%		1500	1785	1978	15140
162354909	29	12.860	8/9/2016 1:44:11 PM	1.545%	0.312%	1.199%		1500	1815	2001	15146
162354910	30	9.760	8/9/2016 1:48:59 PM	2.312%	0.366%	2.090%		1499	1855	2027	15147
162354910	31	11.310	8/9/2016 1:53:47 PM	2.337%	0.395%	2.551%		1500	1915	2115	15173
162354918	32	12.290	8/9/2016 1:58:35 PM	9.850%	1.403%	16.435%		1500	3349	3942	15517
162354918	33	20.030	8/9/2016 2:03:23 PM	10.018	1.532%	16.915%		1501	4554	5561	15802
162354919	34	15.680	8/9/2016 2:08:11 PM	10.053	1.527%	16.721%		1502	3904	4703	15658
162354919	35	16.750	8/9/2016 2:12:59 PM	10.551	1.581%	17.851%		1502	4193	5071	15730
162354919D	36	14.400	8/9/2016 2:17:47 PM	10.661	1.576%	17.240%		1502	3840	4601	15631
162354919D	37	15.600	8/9/2016 2:22:35 PM	10.719	1.596%	17.891%		1502	4049	4877	15693
CCV	38	10.300	8/9/2016 2:27:23 PM	0.902%	4.088%	-1.159%		1502	1655	3013	15106
CCB	39	86.440	8/9/2016 2:32:12 PM	-0.02%	0.016%	-0.35%		1504	1519	1624	15145
162354919MS	40	20.490	8/9/2016 2:37:02 PM	11.239	1.987%	18.211%		1502	5000	6316	15881
162354919MS	41	16.330	8/9/2016 2:41:52 PM	11.384	2.528%	18.280%		1504	4331	5664	15749
CCV	42	10.210	8/9/2016 2:47:49 PM	0.825%	4.036%	-6.33%		1504	1645	2976	15138
CCB	43	62.310	8/9/2016 2:52:45 PM	-0.04%	0.034%	-0.88%		1505	1519	1645	15151
162354904	44	5.660	8/9/2016 3:11:23 PM	6.563%	1.349%	8.790%		1501	2246	2543	15221
162354904	45	6.46	8/9/2016 3:16:11 PM	6.354%	1.325%	9.748%		1500	2320	2642	15237
162354908	46	5.25	8/9/2016 4:18:50 PM	7.492%	1.249%	13.637%		1498	2117	2383	15236
162354908	47	6.65	8/9/2016 4:23:39 PM	7.818%	1.310%	11.970%		1499	2302	2632	15258
162354911	48	6.52	8/9/2016 4:28:29 PM	4.236%	0.655%	6.124%		1499	1937	2131	15184
162354911	49	8.57	8/9/2016 4:33:18 PM	4.499%	0.689%	6.269%		1499	2104	2349	15214
162354903	50	9.08	8/9/2016 4:38:07 PM	3.274%	0.594%	5.856%		1500	2032	2260	15217
162354903	51	8.83	8/9/2016 4:42:56 PM	4.14%	0.742%	7.685%		1500	2140	2426	15268
162354902	52	12.90	8/9/2016 4:47:46 PM	6.559%	0.219%	0.464%		1500	1588	1736	15128
162354902	53	16.27	8/9/2016 4:52:36 PM	0.360%	0.216%	0.551%		1500	1593	1763	15134

Run Details				Results				Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
162354902	53	16.250	8/9/2016 4:52:36 PM	0.398%	0.216%	0.551%	1500	1593	1763	15134	
CCV	54	10.350	8/9/2016 4:57:26 PM	0.901%	3.969%	5.576%	1501	1668	2995	15233	
CCB	55	61.910	8/9/2016 5:02:17 PM	-0.02%	0.009%	-0.72%	1503	1519	1598	15136	
162354901	56	16.610	8/10/2016 8:09:57 AM	0.399%	0.338%	22.734%	1503	1695	1930	15901	
162354901	57	15.150	8/10/2016 8:14:44 AM	0.387%	0.331%	7.220%	1504	1631	1847	15368	
162354605	58	11.160	8/10/2016 8:19:30 AM	1.956%	0.509%	4.859%	1505	1856	2093	15266	
162354605	59	10.620	8/10/2016 8:24:17 AM	1.754%	0.466%	2.436%	1503	1804	2018	15197	
162354606	60	15.370	8/10/2016 8:29:03 AM	1.487%	0.479%	1.975%	1504	1867	2155	15215	
162354606	61	16.190	8/10/2016 8:33:50 AM	1.242%	0.458%	1.383%	1503	1823	2113	15187	
162354617	62	7.760	8/10/2016 8:38:36 AM	1.757%	2.444%	23.786%	1504	3195	3841	15523	
162354617	63	5.290	8/10/2016 8:43:23 AM	1.762%	2.420%	21.819%	1504	2622	3078	15384	
162354618	64	5.680	8/10/2016 8:48:10 AM	1.855%	2.897%	27.766%	1504	3113	3681	15466	
162354618	65	6.310	8/10/2016 8:52:56 AM	1.954%	3.079%	28.384%	1506	3328	3989	15529	
CCV	66	10.190	8/10/2016 8:57:43 AM	0.868%	3.457%	-0.684%	1505	1653	2799	15147	
CCB	67	52.020	8/10/2016 9:02:30 AM	-0.008%	0.006%	-0.249%	1509	1519	1591	15175	
162354619	68	10.620	8/10/2016 9:07:56 AM	2.180%	0.594%	5.059%	1507	1927	2183	15290	
162354619	69	9.170	8/10/2016 9:12:43 AM	2.334%	0.559%	4.069%	1506	1848	2068	15249	
CCV	70	10.250	8/10/2016 9:20:42 AM	0.894%	4.113%	-1.456%	1505	1656	3016	15136	
CCB	71	86.470	8/10/2016 9:25:29 AM	-0.004%	0.012%	-0.196%	1506	1517	1611	15142	
162379117	1	8.100	8/10/2016 10:48:38 AM	1.177%	0.602%	5.098%	1503	1671	1883	15226	
162379117	2	8.570	8/10/2016 10:53:25 AM	1.047%	0.540%	2.032%	1503	1658	1862	15181	
162379118	3	10.930	8/10/2016 10:58:12 AM	1.106%	0.535%	1.912%	1503	1704	1946	15182	
162379118	4	7.850	8/10/2016 11:02:58 AM	0.974%	0.478%	0.887%	1504	1637	1815	15168	
162379119	5	11.650	8/10/2016 11:07:45 AM	1.044%	0.558%	1.794%	1504	1706	1968	15192	
162379119	6	5.790	8/10/2016 11:12:32 AM	1.135%	0.432%	0.516%	1505	1621	1760	15166	
162379120	7	16.790	8/10/2016 11:17:19 AM	1.176%	0.635%	2.311%	1503	1821	2212	15224	
162379120	8	10.310	8/10/2016 11:22:06 AM	1.070%	0.625%	1.448%	1506	1690	1951	15200	

Run Details			Results				Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
162379120	8	10.310	8/10/2016 11:22:06 AM	1.070%	0.625%	1.448%	1506	1690	1951	15200
162379120D	9	6.970	8/10/2016 11:26:53 AM	1.095%	0.529%	0.928%	1505	1638	1813	15178
162379120D	10	14.500	8/10/2016 11:31:40 AM	1.127%	0.644%	2.127%	1506	1772	2121	15231
CCV	11	10.490	8/10/2016 11:36:26 AM	0.885%	3.869%	-1.565%	1506	1658	2970	15139
CCB	12	39.700	8/10/2016 11:41:14 AM	-0.10%	0.007%	-2.13%	1507	1518	1588	15163
162379120MS	13	13.610	8/10/2016 11:47:11 AM	1.877%	3.013%	2.230%	1504	1907	3231	15217
162379120MS	14	15.490	8/10/2016 11:51:58 AM	1.810%	2.631%	2.505%	1506	1946	3263	15248
162354604	15	10.030	8/10/2016 11:56:45 AM	1.272%	0.500%	0.248%	1508	1715	1932	15194
162354604	16	17.310	8/10/2016 12:01:33 PM	1.356%	0.375%	1.035%	1506	1875	2137	15207
SRM1944	17	8.740	8/10/2016 12:06:20 PM	4.066%	0.513%	4.042%	1506	2057	2257	15241
MB	18	52.960	8/10/2016 12:11:07 PM	0.005%	-0.019%	-2.44%	1505	1524	1556	15134
SRM1944	19	6.690	8/10/2016 12:15:54 PM	3.770%	0.333%	3.049%	1505	1900	2031	15202
MB	20	82.910	8/10/2016 12:20:46 PM	-0.002%	-0.014%	-1.32%	1504	1518	1543	15129
CCV	21	10.580	8/10/2016 12:25:38 PM	0.906%	3.908%	-1.41%	1505	1665	3000	15163
CCB	22	53.300	8/10/2016 12:30:30 PM	-0.007%	0.019%	-2.05%	1508	1518	1611	15165

# **Sample Raw Data**



Date of report 8/9/2016 9:40:49AM

User ID mansfield\_toc1

DATE & TIME 8/8/2016 9:30:29 AM P\_ID 080816AR
RUN TYPE K1 USER ID mansfield\_toc1
WEIGHT (mg) 10.120 MODE CHN

SIGNALS
ZR 14970 AVERAGE RESULTS
NR 17466 KC 13.656
CR 18927 KH 24.958
HR 31784 KN 0.201
BLANKS 37 620 342
K FACTORS 1.0% 5.03% 11.67%
FILL TIME 54 Seconds

DATE & TIME 8/8/2016 9:35:40 AM P\_ID 080816AR
RUN TYPE BLANK USER ID mansfield\_toc1
MODE CHN

SIGNALS
ZR 15032 AVERAGE RESULTS
NR 15788 CARBON 44
CR 15839 HYDROGEN 620
HR 19005 NITROGEN 342
FILL TIME 52 Seconds
NUMBER MESSAGE
16 HYDROGEN BLANK OUT OF TOLERANCE
17 NITROGEN BLANK OUT OF TOLERANCE

DATE & TIME 8/8/2016 9:41:45 AM P\_ID 080816AR
SAMPLE ID 1000 USER ID mansfield\_toc1
WEIGHT (mg) 10.040 MODE CHN

SIGNALS
ZR 14995
NR 15299
CR 15305
HR 27399
CARBON -0.28%
HYDROGEN 4.574%
NITROGEN -1.881%
BLANKS 44 620 342
K FACTORS 13.656 24.958 0.201
FILL COMB BOOST1 BOOST2
0 0 0 0
FILL TIME 42 Seconds

DATE & TIME 8/8/2016 9:45:45 AM P\_ID 080816AR
SAMPLE ID 1000 USER ID mansfield\_toc1
WEIGHT (mg) 10.040 MODE CHN

SIGNALS
ZR 15008
NR 15175
CR 15332
HR 27722
CARBON 0.082%
HYDROGEN 4.697%
NITROGEN -8.672%
BLANKS 44 620 342
K FACTORS 13.656 24.958 0.201

FILL 0 COMB 0 BOOST1 0 BOOST2 0  
 FILL TIME 42 Seconds

DATE & TIME 8/8/2016 9:50:46 AM P\_ID 080816AR  
 SAMPLE ID 5000 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.400 MODE CHN

SIGNALS  
 ZR 15022  
 NR 15147  
 CR 15894  
 HR 28235  
 CARBON 0.495%  
 HYDROGEN 4.516%  
 NITROGEN 10.381%  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL 0 COMB 0 BOOST1 0 BOOST2 0  
 FILL TIME 42 Seconds

DATE & TIME 8/8/2016 9:55:47 AM P\_ID 080816AR  
 SAMPLE ID 10000 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.400 MODE CHN

SIGNALS  
 ZR 15021  
 NR 15132  
 CR 16554  
 HR 28723  
 CARBON 0.999%  
 HYDROGEN 4.582%  
 NITROGEN 11.379%  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL 0 COMB 0 BOOST1 0 BOOST2 0  
 FILL TIME 42 Seconds

DATE & TIME 8/8/2016 10:00:48 AM P\_ID 080816AR  
 SAMPLE ID 20000 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.440 MODE CHN

SIGNALS  
 ZR 15023  
 NR 15125  
 CR 18053  
 HR 30222  
 CARBON 2.023%  
 HYDROGEN 4.432%  
 NITROGEN 11.437%  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL 0 COMB 0 BOOST1 0 BOOST2 0  
 FILL TIME 43 Seconds

DATE & TIME 8/8/2016 10:25:28 AM P\_ID 080816AR  
 SAMPLE ID 40000 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.600 MODE CHN

SIGNALS  
 ZR 14985

CARBON	3.955%	NR	15095
HYDROGEN	4.291%	CR	20864
NITROGEN	10.889%	HR	32837
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 10:36:48 AM	P_ID	080816AR
SAMPLE ID	ICV	USER ID	mansfield_toc1
WEIGHT (mg)	10.200	MODE	CHN

SIGNALS

		ZR	15005
CARBON	3.955%	NR	15096
HYDROGEN	4.291%	CR	16511
NITROGEN	10.889%	HR	28657
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 10:41:58 AM	P_ID	080816AR
SAMPLE ID	ICV	USER ID	mansfield_toc1
WEIGHT (mg)	10.200	MODE	CHN

SIGNALS

		ZR	15014
CARBON	0.001%	NR	15102
HYDROGEN	0.076%	CR	15139
NITROGEN	-1.704%	HR	17164
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 10:49:28 AM	P_ID	080816AR
SAMPLE ID	HICV	USER ID	mansfield_toc1
WEIGHT (mg)	52.020	MODE	CHN

SIGNALS

		ZR	15006
CARBON	3.959%	NR	15104
HYDROGEN	0.921%	CR	13273
NITROGEN	-2.334%	HR	55852
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	45 Seconds		

DATE & TIME	8/8/2016 11:04:06 AM	P_ID	080816AR
SAMPLE ID	SRM1944	USER ID	mansfield_toc1
WEIGHT (mg)	7.550	MODE	CHN

				SIGNALS			
				ZR	14994		
CARBON	5.048%			NR	15202		
HYDROGEN	8.927%			CR	20451		
NITROGEN	-8.830%			HR	37892		
BLANKS	44	620	342				
K FACTORS	13.656	24.958	0.201				
FILL	COMB	BOOST1	BOOST2				
	0	0	0				
FILL TIME	49 Seconds						

DATE & TIME	8/8/2016 11:09:12 AM	P_ID	080816AR
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	64.110	MODE	CHN

				SIGNALS			
				ZR	15022		
CARBON	0.002%			NR	15124		
HYDROGEN	0.995%			CR	15185		
NITROGEN	-1.862%			HR	31726		
BLANKS	44	620	342				
K FACTORS	13.656	24.958	0.201				
FILL	COMB	BOOST1	BOOST2				
	0	0	0				
FILL TIME	48 Seconds						

DATE & TIME	8/8/2016 11:14:17 AM	P_ID	080816AR
SAMPLE ID	SRM1944	USER ID	mansfield_toc1
WEIGHT (mg)	8.370	MODE	CHN

				SIGNALS			
				ZR	15042		
CARBON	4.550%			NR	15236		
HYDROGEN	1.801%			CR	20481		
NITROGEN	-8.797%			HR	24863		
BLANKS	44	620	342				
K FACTORS	13.656	24.958	0.201				
FILL	COMB	BOOST1	BOOST2				
	0	0	0				
FILL TIME	47 Seconds						

DATE & TIME	8/8/2016 11:19:22 AM	P_ID	080816AR
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	74.650	MODE	CHN

				SIGNALS			
				ZR	15012		
CARBON	0.002%			NR	15109		
HYDROGEN	0.066%			CR	15172		
NITROGEN	-1.633%			HR	17013		
BLANKS	44	620	342				

K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 46 Seconds

DATE & TIME 8/8/2016 11:42:37 AM P\_ID 080816AR  
 SAMPLE ID 162354610 USER ID mansfield\_toc1  
 WEIGHT (mg) 15.640 15.57 MODE CHN

SIGNALS  
 ZR 14981  
 NR 15999  
 CR 48074  
 HR 60733  
 CARBON ~~14.997%~~ 15.064  
 HYDROGEN 3.084%  
 NITROGEN 21.504%  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 44 Seconds

DATE & TIME 8/8/2016 11:47:45 AM P\_ID 080816AR  
 SAMPLE ID 162354610 USER ID mansfield\_toc1  
 WEIGHT (mg) 19.440 19.09 MODE CHN

SIGNALS  
 ZR 15007  
 NR 15874  
 CR 43442  
 HR 54842  
 CARBON 11.504% 11.541  
 HYDROGEN 1.100%  
 NITROGEN 11.863%  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 44 Seconds

DATE & TIME 8/8/2016 11:52:43 AM P\_ID 080816AR  
 SAMPLE ID 162354611 USER ID mansfield\_toc1  
 WEIGHT (mg) 19.420 19.26 MODE CHN

SIGNALS  
 ZR 15022  
 NR 15150  
 CR 16531  
 HR 19401  
 CARBON 0.504% .508  
 HYDROGEN 0.464%  
 NITROGEN -5.482%  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 44 Seconds

DATE & TIME 8/8/2016 11:57:45 AM P\_ID 080816AR  
 SAMPLE ID 162354611 USER ID mansfield\_toc1  
 WEIGHT (mg) 18.780 18.62 MODE CHN

				SIGNALS
				ZR 15012
CARBON	0.393%	396		NR 15134
HYDROGEN	0.352%			CR 16186
NITROGEN	-5.828%			HR 18458
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	44 Seconds			

DATE & TIME	8/8/2016 12:02:48 PM	P_ID	080816AR
SAMPLE ID	162354612	USER ID	mansfield_toc1
WEIGHT (mg)	19.510 19.38	MODE	CHN

				SIGNALS
				ZR 15010
CARBON	2.371%	2387		NR 15260
HYDROGEN	0.743%			CR 21620
NITROGEN	-2.346%			HR 25858
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	44 Seconds			

DATE & TIME	8/8/2016 12:03:31 PM	P_ID	080816AR
SAMPLE ID	162354612	USER ID	mansfield_toc1
WEIGHT (mg)	19.510 12.75	MODE	CHN

				SIGNALS
				ZR 14996
CARBON	2.375%	2392		NR 15192
HYDROGEN	0.764%			CR 19400
NITROGEN	-5.657%			HR 22468
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	44 Seconds			

DATE & TIME	8/8/2016 12:12:53 PM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.610	MODE	CHN

				SIGNALS
				ZR 15004
CARBON	0.988%			NR 15096
HYDROGEN	4.577%			CR 16572
NITROGEN	-11.723%			HR 29311
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	44 Seconds			

DATE & TIME	8/8/2016 12:17:56 PM	P_ID	080816AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	89.250	MODE	CHN

SIGNALS

		ZR	15030
CARBON	1.0%	NR	15118
HYDROGEN	0.000%	CR	15157
NITROGEN	1.16%	HR	16644
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 12:24:46 PM	P_ID	080816AR
SAMPLE ID	162354613	USER ID	mansfield_toc1
WEIGHT (mg)	<del>8.080</del> 8.26	MODE	CHN

SIGNALS

		ZR	15007
CARBON	26.580% 26.001	NR	15700
HYDROGEN	4.319%	CR	45072
NITROGEN	21.612%	HR	54402
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 12:29:48 PM	P_ID	080816AR
SAMPLE ID	162354613	USER ID	mansfield_toc1
WEIGHT (mg)	<del>9.430</del> 9.64	MODE	CHN

SIGNALS

		ZR	15027
CARBON	26.326% 25.753	NR	15827
HYDROGEN	4.464%	CR	49772
NITROGEN	24.163%	HR	60899
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 12:34:47 PM	P_ID	080816AR
SAMPLE ID	162354614	USER ID	mansfield_toc1
WEIGHT (mg)	11.630 11.53	MODE	CHN

SIGNALS

		ZR	15032
CARBON	3.255% 3.283	NR	15194
HYDROGEN	0.848%	CR	20408
NITROGEN	-7.700%	HR	23489

BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 41 Seconds

DATE & TIME 8/8/2016 12:39:47 PM P\_ID 080816AR  
 SAMPLE ID 162354614 USER ID mansfield\_toc1  
 WEIGHT (mg) ~~15.640~~ 15.50 MODE CHN

SIGNALS  
 ZR 15018  
 NR 15194  
 CR 20701  
 HR 23799  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 41 Seconds

CARBON 2.558% 2.581  
 HYDROGEN 0.635%  
 NITROGEN 5.281%

DATE & TIME 8/8/2016 12:44:47 PM P\_ID 080816AR  
 SAMPLE ID 162354615 USER ID mansfield\_toc1  
 WEIGHT (mg) ~~15.120~~ 11.64 MODE CHN

SIGNALS  
 ZR 15012  
 NR 15178  
 CR 21113  
 HR 24034  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 41 Seconds

CARBON 2.558% 2.581  
 HYDROGEN 0.635%  
 NITROGEN 5.281%

DATE & TIME 8/8/2016 12:49:47 PM P\_ID 080816AR  
 SAMPLE ID 162354615 USER ID mansfield\_toc1  
 WEIGHT (mg) ~~6.870~~ 6.82 MODE CHN

SIGNALS  
 ZR 15008  
 NR 15134  
 CR 17607  
 HR 19218  
 BLANKS 44 620 342  
 K FACTORS 13.656 24.958 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 41 Seconds

CARBON 2.589% 2.608  
 HYDROGEN 0.578%  
 NITROGEN 15.642%

DATE & TIME 8/8/2016 12:54:46 PM P\_ID 080816AR  
 SAMPLE ID 162354912 USER ID mansfield\_toc1  
 WEIGHT (mg) 7.930 9.81 MODE CHN



			SIGNALS
			ZR 15010
CARBON	<del>5.609%</del> 7.768		NR 15299
HYDROGEN	1.755%		CR 25749
NITROGEN	-3.325%		HR 29843
BLANKS	44 620 342		
K FACTORS	13.656 24.958 0.201		
FILL	COMB BOOST1 BOOST2		
	0 0 0		
FILL TIME	41 Seconds		

DATE & TIME	8/8/2016 12:59:45 PM	P_ID	080816AR
SAMPLE ID	162354912	USER ID	mansfield_toc1
WEIGHT (mg)	<del>9.440</del> 11.68	MODE	CHN

			SIGNALS
			ZR 15007
CARBON	<del>5.742%</del> 7.874		NR 15341
HYDROGEN	1.870%		CR 27944
NITROGEN	-4.22%		HR 32970
BLANKS	44 620 342		
K FACTORS	13.656 24.958 0.201		
FILL	COMB BOOST1 BOOST2		
	0 0 0		
FILL TIME	41 Seconds		

DATE & TIME	8/8/2016 1:04:45 PM	P_ID	080816AR
SAMPLE ID	162354913	USER ID	mansfield_toc1
WEIGHT (mg)	<del>15.510</del> 15.55	MODE	CHN

			SIGNALS
			ZR 15016
CARBON	<del>5.214%</del> 5.201		NR 15331
HYDROGEN	1.151%		CR 26419
NITROGEN	-8.66%		HR 31495
BLANKS	44 620 342		
K FACTORS	13.656 24.958 0.201		
FILL	COMB BOOST1 BOOST2		
	0 0 0		
FILL TIME	41 Seconds		

DATE & TIME	8/8/2016 1:09:44 PM	P_ID	080816AR
SAMPLE ID	162354913	USER ID	mansfield_toc1
WEIGHT (mg)	<del>14.060</del> 14.10	MODE	CHN

			SIGNALS
			ZR 15016
CARBON	<del>5.009%</del> 4.995		NR 15303
HYDROGEN	1.130%		CR 24964
NITROGEN	-1.946%		HR 29551
BLANKS	44 620 342		
K FACTORS	13.656 24.958 0.201		
FILL	COMB BOOST1 BOOST2		
	0 0 0		
FILL TIME	41 Seconds		

DATE & TIME	8/8/2016 1:14:46 PM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.280	MODE	CHN

SIGNALS

		ZR	14999
CARBON	0.982%	NR	15090
HYDROGEN	4.893%	CR	16512
NITROGEN	-12.147%	HR	29686
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 1:19:48 PM	P_ID	080816AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	55.720	MODE	CHN

SIGNALS

		ZR	15030
CARBON	-0.002%	NR	15121
HYDROGEN	0.049%	CR	15146
NITROGEN	-2.241%	HR	16452
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 1:42:20 PM	P_ID	080816AR
SAMPLE ID	162354914	USER ID	mansfield_toc1
WEIGHT (mg)	6.350 6.43	MODE	CHN

SIGNALS

		ZR	15012
CARBON	6.727% 6.643	NR	15234
HYDROGEN	1.264%	CR	21111
NITROGEN	-9.402%	HR	23734
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	56 Seconds		

DATE & TIME	8/8/2016 1:47:23 PM	P_ID	080816AR
SAMPLE ID	162354914	USER ID	mansfield_toc1
WEIGHT (mg)	6.480 6.56	MODE	CHN

SIGNALS

		ZR	15008
CARBON	7.573% 7.480	NR	15222
HYDROGEN	1.378%	CR	21967
NITROGEN	-9.827%	HR	24815

BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 1:52:29 PM	P_ID	080816AR
SAMPLE ID	162354914D	USER ID	mansfield_loc1
WEIGHT (mg)	<del>8.0</del> 8.10	MODE	CHN

SIGNALS

	ZR	15009
CARBON	7.159%	7.071
HYDROGEN	1.305%	
NITROGEN	-5.659%	
BLANKS	44	620 342
K FACTORS	13.656	24.958 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	48 Seconds	

DATE & TIME	8/8/2016 1:57:31 PM	P_ID	080816AR
SAMPLE ID	162354914D	USER ID	mansfield_loc1
WEIGHT (mg)	<del>5.010</del> 5.17	MODE	CHN

SIGNALS

	ZR	14996
CARBON	6.804%	6.723
HYDROGEN	1.104%	
NITROGEN	-15.293%	
BLANKS	44	620 342
K FACTORS	13.656	24.958 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	47 Seconds	

DATE & TIME	8/8/2016 2:02:38 PM	P_ID	080816AR
SAMPLE ID	162354914MS	USER ID	mansfield_loc1
WEIGHT (mg)	<del>11.190</del> 11.33	MODE	CHN

SIGNALS

	ZR	15005
CARBON	<del>8.337%</del> 8.234	
HYDROGEN	4.257%	
NITROGEN	-1.289%	
BLANKS	44	620 342
K FACTORS	13.656	24.958 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	46 Seconds	

DATE & TIME	8/8/2016 2:07:41 PM	P_ID	080816AR
SAMPLE ID	162354914MS	USER ID	mansfield_loc1
WEIGHT (mg)	<del>11.220</del> 11.36	MODE	CHN

				SIGNALS	
CARBON	8.158%	8.057		ZR	15017
HYDROGEN	4.183%			NR	15321
NITROGEN	-1.685%			CR	27864
BLANKS	44	620	342	HR	40197
K FACTORS	13.656	24.958	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	45 Seconds				

DATE & TIME	8/8/2016 2:12:44 PM	P_ID	080816AR
SAMPLE ID	162354914MSD	USER ID	mansfield_toc1
WEIGHT (mg)	5.920 5.99	MODE	CHN

				SIGNALS	
CARBON	8.158%	8.057		ZR	15015
HYDROGEN	4.183%			NR	15214
NITROGEN	-1.685%			CR	22307
BLANKS	44	620	342	HR	35008
K FACTORS	13.656	24.958	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	45 Seconds				

DATE & TIME	8/8/2016 2:17:47 PM	P_ID	080816AR
SAMPLE ID	162354914MSD	USER ID	mansfield_toc1
WEIGHT (mg)	5.920 5.99	MODE	CHN

				SIGNALS	
CARBON	8.466%	8.360		ZR	15034
HYDROGEN	5.516%			NR	15293
NITROGEN	-4.752%			CR	25384
BLANKS	44	620	342	HR	37968
K FACTORS	13.656	24.958	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	45 Seconds				

DATE & TIME	8/8/2016 2:22:50 PM	P_ID	080816AR
SAMPLE ID	162363715	USER ID	mansfield_toc1
WEIGHT (mg)	7.700	MODE	CHN

				SIGNALS	
CARBON	-0.056%			ZR	15036
HYDROGEN	0.486%			NR	15125
NITROGEN	-16.347%			CR	15110
BLANKS	44	620	342	HR	16664
K FACTORS	13.656	24.958	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	44 Seconds				

DATE & TIME	8/8/2016 2:27:53 PM	P_ID	080816AR
SAMPLE ID	162354915	USER ID	mansfield_toc1
WEIGHT (mg)	13.130	MODE	CHN

SIGNALS

		ZR	15016
CARBON	9.956%	NR	15439
HYDROGEN	2.363%	CR	33334
NITROGEN	3.069%	HR	41699
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 2:34:53 PM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.250	MODE	CHN

SIGNALS

		ZR	15005
CARBON	-0.034%	NR	15084
HYDROGEN	0.063%	CR	15080
NITROGEN	-12.765%	HR	15860
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	44 Seconds		

DATE & TIME	8/8/2016 2:39:55 PM	P_ID	080816AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	65.650	MODE	CHN

SIGNALS

		ZR	15005
CARBON	-0.001%	NR	15092
HYDROGEN	-0.011%	CR	15124
NITROGEN	-1.932%	HR	15562
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	43 Seconds		

DATE & TIME	8/8/2016 2:46:57 PM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.0	MODE	CHN

SIGNALS

		ZR	14999
CARBON	0.899%	NR	15112
HYDROGEN	4.995%	CR	16383
NITROGEN	-11.393%	HR	29469

BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	57 Seconds		

DATE & TIME	8/8/2016 2:51:59 PM	P_ID	080816AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	38.700	MODE	CHN

SIGNALS

		ZR	15050
CARBON	0.002%	NR	15111
HYDROGEN	0.060%	CR	15143
NITROGEN	-3.612%	HR	16339
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	43 Seconds		

DATE & TIME	8/8/2016 3:02:35 PM	P_ID	080816AR
SAMPLE ID	162354915	USER ID	mansfield_toc1
WEIGHT (mg)	<del>44.300</del> 14.49	MODE	CHN

SIGNALS

		ZR	15012
CARBON	<del>5.883%</del> 5.806	NR	15334
HYDROGEN	1.351%	CR	26866
NITROGEN	-.696%	HR	32307
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	50 Seconds		

DATE & TIME	8/8/2016 3:07:46 PM	P_ID	080816AR
SAMPLE ID	162354915	USER ID	mansfield_toc1
WEIGHT (mg)	<del>40.910</del> 11.05	MODE	CHN

SIGNALS

		ZR	15027
CARBON	<del>5.749%</del> 5.676	NR	15286
HYDROGEN	1.338%	CR	23896
NITROGEN	-3.785%	HR	28159
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	52 Seconds		

DATE & TIME	8/8/2016 3:12:58 PM	P_ID	080816AR
SAMPLE ID	162354916	USER ID	mansfield_toc1
WEIGHT (mg)	<del>7.410</del> 12.60	MODE	CHN

		SIGNALS		
		ZR	15023	
CARBON	<del>23.378%</del> 13.748	NR	15715	
HYDROGEN	3.797%	CR	39415	
NITROGEN	23.499%	HR	47057	
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	54 Seconds			

DATE & TIME	8/8/2016 3:18:11 PM	P_ID	080816AR
SAMPLE ID	162354916	USER ID	mansfield_toc1
WEIGHT (mg)	<del>5.930</del> 10.08	MODE	CHN

		SIGNALS		
		ZR	15028	
CARBON	<del>22.166%</del> 13.040	NR	15591	
HYDROGEN	3.671%	CR	33585	
NITROGEN	18.541%	HR	39638	
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	54 Seconds			

DATE & TIME	8/8/2016 3:23:24 PM	P_ID	080816AR
SAMPLE ID	162354917	USER ID	mansfield_toc1
WEIGHT (mg)	<del>7.300</del> 8.85	MODE	CHN

		SIGNALS		
		ZR	15017	
CARBON	<del>6.935%</del> 5.720	NR	15277	
HYDROGEN	1.411%	CR	22234	
NITROGEN	-5.588%	HR	25424	
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	55 Seconds			

DATE & TIME	8/8/2016 3:28:39 PM	P_ID	080816AR
SAMPLE ID	162354917	USER ID	mansfield_toc1
WEIGHT (mg)	<del>9.520</del> 11.54	MODE	CHN

		SIGNALS		
		ZR	15008	
CARBON	<del>6.989%</del> 5.766	NR	15303	
HYDROGEN	1.381%	CR	24433	
NITROGEN	-2.456%	HR	28335	
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	56 Seconds			

DATE & TIME	8/8/2016 3:33:47 PM	P_ID	080816AR
SAMPLE ID	162407401	USER ID	mansfield_toc1
WEIGHT (mg)	23.380	MODE	CHN

SIGNALS

		ZR	15001
CARBON	1.432%	NR	15248
HYDROGEN	0.496%	CR	19864
NITROGEN	-2.022%	HR	23378
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	50 Seconds		

DATE & TIME	8/8/2016 3:38:55 PM	P_ID	080816AR
SAMPLE ID	162407401	USER ID	mansfield_toc1
WEIGHT (mg)	14.150	MODE	CHN

SIGNALS

		ZR	15018
CARBON	1.567%	NR	15188
HYDROGEN	0.467%	CR	18260
NITROGEN	-6.048%	HR	20529
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	49 Seconds		

DATE & TIME	8/8/2016 3:43:59 PM	P_ID	080816AR
SAMPLE ID	162407402	USER ID	mansfield_toc1
WEIGHT (mg)	10.900	MODE	CHN

SIGNALS

		ZR	15010
CARBON	2.508%	NR	15124
HYDROGEN	0.544%	CR	18901
NITROGEN	-10.407%	HR	21000
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	46 Seconds		

DATE & TIME	8/8/2016 3:49:03 PM	P_ID	080816AR
SAMPLE ID	162407402	USER ID	mansfield_toc1
WEIGHT (mg)	15.730	MODE	CHN

SIGNALS

		ZR	15007
CARBON	1.771%	NR	15142
HYDROGEN	0.488%	CR	18990
NITROGEN	-6.547%	HR	21525



BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	45 Seconds		

DATE & TIME	8/8/2016 3:54:04 PM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.340	MODE	CHN

SIGNALS

ZR	14984
NR	15069
CR	16438
HR	29422

CARBON	0.938%
HYDROGEN	4.791%
NITROGEN	-12.366%
BLANKS	44 620 342
K FACTORS	13.656 24.958 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	43 Seconds

DATE & TIME	8/8/2016 4:12:31 PM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	12.740	MODE	CHN

SIGNALS

ZR	15020
NR	15129
CR	15172
HR	16305

CARBON	0.0%
HYDROGEN	0.039%
NITROGEN	-2.208%
BLANKS	44 620 342
K FACTORS	13.656 24.958 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	55 Seconds

DATE & TIME	8/8/2016 4:09:36 PM	P_ID	080816AR
SAMPLE ID	162407403	USER ID	mansfield_toc1
WEIGHT (mg)	14.840	MODE	CHN

SIGNALS

ZR	15009
NR	15292
CR	45102
HR	47653

CARBON	14.688%
HYDROGEN	0.521%
NITROGEN	-1.978%
BLANKS	44 620 342
K FACTORS	13.656 24.958 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	48 Seconds

DATE & TIME	8/8/2016 4:20:09 PM	P_ID	080816AR
SAMPLE ID	162407403	USER ID	mansfield_toc1
WEIGHT (mg)	10.330	MODE	CHN

				SIGNALS
				ZR 14988
CARBON	21.819%			NR 15234
HYDROGEN	0.639%			CR 46058
NITROGEN	-4.624%			HR 48326
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	41 Seconds			

DATE & TIME	8/8/2016 4:25:06 PM	P_ID	080816AR
SAMPLE ID	162407404	USER ID	mansfield_toc1
WEIGHT (mg)	6.280	MODE	CHN

				SIGNALS
				ZR 14992
CARBON	29.250%			NR 15351
HYDROGEN	2.139%			CR 40480
NITROGEN	1.347%			HR 44453
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	38 Seconds			

DATE & TIME	8/8/2016 4:30:01 PM	P_ID	080816AR
SAMPLE ID	162407404	USER ID	mansfield_toc1
WEIGHT (mg)	8.410	MODE	CHN

				SIGNALS
				ZR 14997
CARBON	20.606%			NR 15408
HYDROGEN	2.143%			CR 39117
NITROGEN	4.082%			HR 44235
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	37 Seconds			

DATE & TIME	8/8/2016 4:34:50 PM	P_ID	080816AR
SAMPLE ID	162407405	USER ID	mansfield_toc1
WEIGHT (mg)	10.310	MODE	CHN

				SIGNALS
				ZR 15082
CARBON	24.039%			NR 15451
HYDROGEN	2.926%			CR 49341
NITROGEN	1.303%			HR 57491
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	30 Seconds			

DATE & TIME	8/8/2016 4:39:38 PM	P_ID	080816AR
SAMPLE ID	162407405	USER ID	mansfield_toc1
WEIGHT (mg)	8.450	MODE	CHN

SIGNALS

		ZR	15016
CARBON	23.386%	NR	15341
HYDROGEN	3.023%	CR	42371
NITROGEN	-1.001%	HR	49366
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/8/2016 4:44:27 PM	P_ID	080816AR
SAMPLE ID	162407406	USER ID	mansfield_toc1
WEIGHT (mg)	7.530	MODE	CHN

SIGNALS

		ZR	14992
CARBON	24.672%	NR	15063
HYDROGEN	1.174%	CR	40477
NITROGEN	-17.905%	HR	43304
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/8/2016 4:49:16 PM	P_ID	080816AR
SAMPLE ID	162407406	USER ID	mansfield_toc1
WEIGHT (mg)	6.540	MODE	CHN

SIGNALS

		ZR	14964
CARBON	30.031%	NR	15088
HYDROGEN	1.203%	CR	41953
NITROGEN	-16.584%	HR	44536
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/8/2016 4:54:05 PM	P_ID	080816AR
SAMPLE ID	162407402	USER ID	mansfield_toc1
WEIGHT (mg)	13.210	MODE	CHN

SIGNALS

		ZR	14982
CARBON	5.043%	NR	15064
HYDROGEN	0.452%	CR	24206
NITROGEN	-9.792%	HR	26317

				SIGNALS
				ZR 15015
CARBON	1.167%			NR 15959
HYDROGEN	4.687%			CR 17621
NITROGEN	29.508%			HR 30114
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	30 Seconds			

DATE & TIME	8/9/2016 7:57:59 AM	P_ID	080816AR
SAMPLE ID	162354615	USER ID	mansfield_toc1
WEIGHT (mg)	0.700	MODE	CHN

				SIGNALS
				ZR 15023
CARBON	0.024%			NR 15266
HYDROGEN	0.026%			CR 15608
NITROGEN	5.535%			HR 16836
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	30 Seconds			

DATE & TIME	8/9/2016 8:18:38 AM	P_ID	080816AR
SAMPLE ID	162354615	USER ID	mansfield_toc1
WEIGHT (mg)	0.700 9.13	MODE	CHN

				SIGNALS
				ZR 14995
CARBON	2.552% 2.571			NR 15162
HYDROGEN	0.593%			CR 18586
NITROGEN	8.976%			HR 20642
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	30 Seconds			

DATE & TIME	8/9/2016 8:23:27 AM	P_ID	080816AR
SAMPLE ID	162354615	USER ID	mansfield_toc1
WEIGHT (mg)	0.240 8.18	MODE	CHN

				SIGNALS
				ZR 15007
CARBON	2.481% 2.499			NR 15138
HYDROGEN	0.517%			CR 17974
NITROGEN	12.740%			HR 19657
BLANKS	44	620	342	
K FACTORS	13.656	24.958	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	30 Seconds			

DATE & TIME	8/9/2016 8:28:16 AM	P_ID	080816AR
SAMPLE ID	162407403	USER ID	mansfield_toc1
WEIGHT (mg)	7.700	MODE	CHN

SIGNALS

	ZR	15004	
CARBON	NR	15203	
15.616%	CR	31667	
HYDROGEN	HR	33368	
0.563%			
NITROGEN			
-9.240%			
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 8:31:24 AM	P_ID	080816AR
SAMPLE ID	162407401	USER ID	mansfield_toc1
WEIGHT (mg)	5.500	MODE	CHN

SIGNALS

	ZR	15020	
CARBON	NR	15224	
11.200%	CR	32502	
HYDROGEN	HR	33885	
0.515%			
NITROGEN			
-11.525%			
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 8:37:53 AM	P_ID	080816AR
SAMPLE ID	162407404	USER ID	mansfield_toc1
WEIGHT (mg)	5.500	MODE	CHN

SIGNALS

	ZR	15010	
CARBON	NR	15294	
17.557%	CR	28597	
HYDROGEN	HR	32013	
2.026%			
NITROGEN			
-5.218%			
BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 8:42:42 AM	P_ID	080816AR
SAMPLE ID	162407404	USER ID	mansfield_toc1
WEIGHT (mg)	6.200	MODE	CHN

SIGNALS

	ZR	15017
CARBON	NR	15312
14.535%	CR	27662
HYDROGEN	HR	31265
1.928%		
NITROGEN		
-3.771%		

BLANKS	44	620	342
K FACTORS	13.656	24.958	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 9:38:13 AM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.198	MODE	CHN

SIGNALS

ZR	14996
NR	15080
CR	17250
HR	29074

CARBON	1.517%
HYDROGEN	4.375%
NITROGEN	-12.511%
BLANKS	44 620 342
K FACTORS	13.656 24.958 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	31 Seconds

DATE & TIME	8/9/2016 9:38:01 AM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.198	MODE	CHN

SIGNALS

ZR	15030
NR	15104
CR	15528
HR	16590

CARBON	0.037%
HYDROGEN	0.024%
NITROGEN	-1.773%
BLANKS	44 620 342
K FACTORS	13.656 24.958 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	31 Seconds

DATE & TIME	8/9/2016 9:28:43 AM	P_ID	080816AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.260	MODE	CHN

SIGNALS

ZR	14997
NR	15084
CR	16573
HR	28885

CARBON	1.031%
HYDROGEN	4.566%
NITROGEN	-12.365%
BLANKS	44 620 342
K FACTORS	13.656 24.958 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	36 Seconds

DATE & TIME	8/9/2016 9:33:33 AM	P_ID	080816AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	59.910	MODE	CHN

				SIGNALS	
				ZR	15028
CARBON	0.005%			NR	15096
HYDROGEN	0.030%			CR	15180
NITROGEN	-2.275%			HR	16245
BLANKS	44	620	342		
K FACTORS	13.656	24.958	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	31 Seconds				

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Date of report 8/10/2016 1:37:59PM

User ID mansfield\_toc1

DATE & TIME 8/9/2016 10:34:45 AM P\_ID 080916AR
SAMPLE ID COND USER ID mansfield\_toc1
WEIGHT (mg) 7.500 MODE CHN

SIGNALS
ZR 15010
NR 15565
CR 20722
HR 38735
CARBON 4.992%
HYDROGEN 9.292%
NITROGEN 14.129%
BLANKS 44 620 342
K FACTORS 13.656 24.958 0.201
FILL COMB BOOST1 BOOST2
0 0 0 0
FILL TIME 34 Seconds

DATE & TIME 8/9/2016 10:40:55 AM P\_ID 080916AR
RUN TYPE K1 USER ID mansfield\_toc1
WEIGHT (mg) 10.350 MODE CHN

SIGNALS
ZR 15015 AVERAGE RESULTS
NR 15203 KC 14.881
CR 16914 KH 24.958
HR 34207 KN 0.201
BLANKS 44 620 342
K FACTORS 1.0% 5.03% 11.67%
FILL TIME 30 Seconds
NUMBER MESSAGE
8 CHECK FOR SAMPLE DROP

DATE & TIME 8/9/2016 10:46:55 AM P\_ID 080916AR
RUN TYPE BLANK USER ID mansfield\_toc1
MODE CHN

SIGNALS
ZR 15024 AVERAGE RESULTS
NR 15135 CARBON 44
CR 15386 HYDROGEN 620
HR 32224 NITROGEN 342
FILL TIME 28 Seconds

DATE & TIME 8/9/2016 10:51:43 AM P\_ID 080916AR
RUN TYPE K1 USER ID mansfield\_toc1
WEIGHT (mg) 10.200 MODE CHN

SIGNALS
ZR 15046 AVERAGE RESULTS
NR 15140 KC 15.028
CR 16732 KH 30.792
HR 32517 KN 0.201
BLANKS 44 620 342
K FACTORS 1.0% 5.03% 11.67%
FILL TIME 29 Seconds



NUMBER MESSAGE  
8 CHECK FOR SAMPLE DROP

DATE & TIME 8/9/2016 11:09:55 AM P\_ID 080916AR  
 RUN TYPE K1 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.320 MODE CHN

SIGNALS

	ZR	15007	AVERAGE RESULTS	
KC	NR	15117	KC	14.786
KH	CR	16662	KH	30.792
KN	HR	29916	KN	0.201
BLANKS	44	620	342	
K FACTORS	1.0%	5.03%	11.67%	
FILL TIME	35 Seconds			

NUMBER MESSAGE  
8 CHECK FOR SAMPLE DROP

DATE & TIME 8/9/2016 11:25:03 AM P\_ID 080916AR  
 RUN TYPE BLANK USER ID mansfield\_toc1  
 MODE CHN

SIGNALS

	ZR	15007	AVERAGE RESULTS	
CARBON	NR	15110	CARBON	75
HYDROGEN	CR	15216	HYDROGEN	620
NITROGEN	HR	18630	NITROGEN	107
FILL TIME	30 Seconds			

NUMBER MESSAGE  
16 HYDROGEN BLANK OUT OF TOLERANCE

DATE & TIME 8/9/2016 11:30:36 AM P\_ID 080916AR  
 SAMPLE ID 0 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.300 MODE CHN

SIGNALS

	ZR	15009		
CARBON	NR	15099		
HYDROGEN	CR	15174		
NITROGEN	HR	28001		
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME 8/9/2016 11:35:24 AM P\_ID 080916AR  
 SAMPLE ID 1000 USER ID mansfield\_toc1  
 WEIGHT (mg) 10.410 MODE CHN

SIGNALS

ZR 15042

CARBON	0.082%	NR	15133
HYDROGEN	3.694%	CR	15334
NITROGEN	-765%	HR	27794
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:40:12 AM	P_ID	080916AR
SAMPLE ID	5000	USER ID	mansfield_toc1
WEIGHT (mg)	10.380	MODE	CHN

SIGNALS

ZR	15058
NR	15146
CR	15917
HR	28680

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:45:01 AM	P_ID	080916AR
SAMPLE ID	10000	USER ID	mansfield_toc1
WEIGHT (mg)	10.510	MODE	CHN

SIGNALS

ZR	15046
NR	15136
CR	16627
HR	29871

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:49:50 AM	P_ID	080916AR
SAMPLE ID	20000	USER ID	mansfield_toc1
WEIGHT (mg)	10.820	MODE	CHN

SIGNALS

ZR	15059
NR	15152
CR	18053
HR	30854

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	30 Seconds		

DATE & TIME	8/9/2016 11:54:39 AM	P_ID	080916AR
SAMPLE ID	40000	USER ID	mansfield_toc1
WEIGHT (mg)	11.200	MODE	CHN

				SIGNALS			
				ZR	15067		
CARBON	3.642%			NR	15159		
HYDROGEN	3.540%			CR	21265		
NITROGEN	-.666%			HR	34093		
BLANKS	75	620	107				
K FACTORS	14.786	30.792	0.201				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	30 Seconds						

DATE & TIME	8/9/2016 12:01:41 PM	P_ID	080916AR
SAMPLE ID	ICV	USER ID	mansfield_toc1
WEIGHT (mg)	10.600	MODE	CHN

				SIGNALS			
				ZR	15030		
CARBON	11.917%			NR	15109		
HYDROGEN	1.177%			CR	16613		
NITROGEN	1.317%			HR	29455		
BLANKS	75	620	107				
K FACTORS	14.786	30.792	0.201				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	29 Seconds						

DATE & TIME	8/9/2016 12:06:28 PM	P_ID	080916AR
SAMPLE ID	ICB	USER ID	mansfield_toc1
WEIGHT (mg)	107.200	MODE	CHN

				SIGNALS			
				ZR	15042		
CARBON	-.001%			NR	15118		
HYDROGEN	0.031%			CR	15181		
NITROGEN	-.144%			HR	16813		
BLANKS	75	620	107				
K FACTORS	14.786	30.792	0.201				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	29 Seconds						

DATE & TIME	8/9/2016 12:11:16 PM	P_ID	080916AR
SAMPLE ID	HICV	USER ID	mansfield_toc1
WEIGHT (mg)	52.190	MODE	CHN

				SIGNALS			
				ZR	15038		
CARBON	3.674%			NR	15122		
HYDROGEN	0.784%			CR	43545		
NITROGEN	-.219%			HR	56770		
BLANKS	75	620	107				

K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 12:28:07 PM P\_ID 080916AR  
 SAMPLE ID SRM1944 USER ID mansfield\_toc1  
 WEIGHT (mg) 13.840 MODE CHN

SIGNALS  
 ZR 15035  
 NR 15287  
 CR 23785  
 HR 42515  
 CARBON 4.116%  
 HYDROGEN 4.250%  
 NITROGEN 5.212%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 32 Seconds

DATE & TIME 8/9/2016 12:41:25 PM P\_ID 080916AR  
 SAMPLE ID MB USER ID mansfield\_toc1  
 WEIGHT (mg) 63.030 MODE CHN

SIGNALS  
 ZR 15011  
 NR 15094  
 CR 15161  
 HR 20663  
 CARBON -0.001%  
 HYDROGEN 0.252%  
 NITROGEN -1.89%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 12:46:12 PM P\_ID 080916AR  
 SAMPLE ID SRM1944 USER ID mansfield\_toc1  
 WEIGHT (mg) 7.860 MODE CHN

SIGNALS  
 ZR 15023  
 NR 15194  
 CR 19667  
 HR 22890  
 CARBON 3.784%  
 HYDROGEN 1.076%  
 NITROGEN 4.051%  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 12:51:00 PM P\_ID 080916AR  
 SAMPLE ID MB USER ID mansfield\_toc1  
 WEIGHT (mg) 53.510 MODE CHN

				SIGNALS
				ZR 15009
CARBON	-.005%			NR 15091
HYDROGEN	0.034%			CR 15126
NITROGEN	-.232%			HR 16312
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 12:55:47 PM	P_ID	080916AR
SAMPLE ID	162354905	USER ID	mansfield_toc1
WEIGHT (mg)	9.600	MODE	CHN

				SIGNALS
				ZR 15003
CARBON	5.216%			NR 15220
HYDROGEN	1.020%			CR 22699
NITROGEN	5.701%			HR 26334
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 1:00:35 PM	P_ID	080916AR
SAMPLE ID	162354905	USER ID	mansfield_toc1
WEIGHT (mg)	10.860	MODE	CHN

				SIGNALS
				ZR 15021
CARBON	5.209%			NR 15254
HYDROGEN	1.001%			CR 23693
NITROGEN	5.772%			HR 27660
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 1:05:23 PM	P_ID	080916AR
SAMPLE ID	162354906	USER ID	mansfield_toc1
WEIGHT (mg)	14.030	MODE	CHN

				SIGNALS
				ZR 15022
CARBON	6.721%			NR 15314
HYDROGEN	1.155%			CR 29331
NITROGEN	6.560%			HR 34939
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/9/2016 1:10:11 PM	P_ID	080916AR
SAMPLE ID	162354906	USER ID	mansfield_toc1
WEIGHT (mg)	12.480	MODE	CHN

SIGNALS

		ZR	15024
CARBON	6.646%	NR	15290
HYDROGEN	1.140%	CR	27629
NITROGEN	6.339%	HR	32630
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:14:59 PM	P_ID	080916AR
SAMPLE ID	162354907	USER ID	mansfield_toc1
WEIGHT (mg)	13.780	MODE	CHN

SIGNALS

		ZR	15023
CARBON	1.447%	NR	15224
HYDROGEN	0.617%	CR	21167
NITROGEN	1.111%	HR	24403
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:19:46 PM	P_ID	080916AR
SAMPLE ID	162354907	USER ID	mansfield_toc1
WEIGHT (mg)	16.280	MODE	CHN

SIGNALS

		ZR	15024
CARBON	2.482%	NR	15226
HYDROGEN	0.531%	CR	21275
NITROGEN	2.903%	HR	24559
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 1:24:34 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.580	MODE	CHN

SIGNALS

		ZR	15021
CARBON	0.897%	NR	15106
HYDROGEN	3.886%	CR	16584
NITROGEN	1.035%	HR	29863

BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 1:29:22 PM P\_ID 080916AR  
 SAMPLE ID CCB USER ID mansfield\_toc1  
 WEIGHT (mg) 81.070 MODE CHN

SIGNALS  
 ZR 15038  
 CARBON -0.03% NR 15119  
 HYDROGEN 0.022% CR 15156  
 NITROGEN -0.160% HR 16337  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 1:39:23 PM P\_ID 080916AR  
 SAMPLE ID 162354909 USER ID mansfield\_toc1  
 WEIGHT (mg) 12.310 MODE CHN

SIGNALS  
 ZR 15008  
 CARBON 1.450% NR 15140  
 HYDROGEN 0.346% CR 17855  
 NITROGEN 1.010% HR 19785  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 1:44:11 PM P\_ID 080916AR  
 SAMPLE ID 162354909 USER ID mansfield\_toc1  
 WEIGHT (mg) 12.860 MODE CHN

SIGNALS  
 ZR 15008  
 CARBON 1.545% NR 15146  
 HYDROGEN 0.312% CR 18158  
 NITROGEN 1.199% HR 20014  
 BLANKS 75 620 107  
 K FACTORS 14.786 30.792 0.201  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 29 Seconds

DATE & TIME 8/9/2016 1:48:59 PM P\_ID 080916AR  
 SAMPLE ID 162354910 USER ID mansfield\_toc1  
 WEIGHT (mg) 9.760 MODE CHN

				SIGNALS	
CARBON	2.312%			ZR	14999
HYDROGEN	0.366%			NR	15147
NITROGEN	2.090%			CR	18558
BLANKS	75	620	107	HR	20277
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 1:53:47 PM	P_ID	080916AR
SAMPLE ID	162354910	USER ID	mansfield_toc1
WEIGHT (mg)	11.310	MODE	CHN

				SIGNALS	
CARBON	2.337%			ZR	15008
HYDROGEN	0.395%			NR	15173
NITROGEN	2.551%			CR	19156
BLANKS	75	620	107	HR	21150
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 1:58:35 PM	P_ID	080916AR
SAMPLE ID	162354918	USER ID	mansfield_toc1
WEIGHT (mg)	12.290	MODE	CHN

				SIGNALS	
CARBON	9.850%			ZR	15004
HYDROGEN	1.403%			NR	15517
NITROGEN	16.435%			CR	33492
BLANKS	75	620	107	HR	39422
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	29 Seconds				

DATE & TIME	8/9/2016 2:03:23 PM	P_ID	080916AR
SAMPLE ID	162354918	USER ID	mansfield_toc1
WEIGHT (mg)	20.030	MODE	CHN

				SIGNALS	
CARBON	10.018%			ZR	15014
HYDROGEN	1.532%			NR	15802
NITROGEN	16.915%			CR	45548
BLANKS	75	620	107	HR	55614
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
	0	0	0		
FILL TIME	29 Seconds				



DATE & TIME	8/9/2016 2:08:11 PM	P_ID	080916AR
SAMPLE ID	162354919	USER ID	mansfield_toc1
WEIGHT (mg)	15.680	MODE	CHN

SIGNALS

	ZR	15024
CARBON	NR	15658
HYDROGEN	CR	39041
NITROGEN	HR	47036
BLANKS	75	620 107
K FACTORS	14.786	30.792 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	30 Seconds	

DATE & TIME	8/9/2016 2:12:59 PM	P_ID	080916AR
SAMPLE ID	162354919	USER ID	mansfield_toc1
WEIGHT (mg)	16.750	MODE	CHN

SIGNALS

	ZR	15022
CARBON	NR	15730
HYDROGEN	CR	41936
NITROGEN	HR	50710
BLANKS	75	620 107
K FACTORS	14.786	30.792 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	30 Seconds	

DATE & TIME	8/9/2016 2:17:47 PM	P_ID	080916AR
SAMPLE ID	162354919D	USER ID	mansfield_toc1
WEIGHT (mg)	14.400	MODE	CHN

SIGNALS

	ZR	15025
CARBON	NR	15631
HYDROGEN	CR	38405
NITROGEN	HR	46011
BLANKS	75	620 107
K FACTORS	14.786	30.792 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	29 Seconds	

DATE & TIME	8/9/2016 2:22:35 PM	P_ID	080916AR
SAMPLE ID	162354919D	USER ID	mansfield_toc1
WEIGHT (mg)	15.600	MODE	CHN

SIGNALS

	ZR	15025
CARBON	NR	15693
HYDROGEN	CR	40493
NITROGEN	HR	48779

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 2:27:23 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.300	MODE	CHN

SIGNALS

		ZR	15023
CARBON	0.902%	NR	15106
HYDROGEN	4.088%	CR	16555
NITROGEN	-1.159%	HR	30139
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/9/2016 2:32:12 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	86.440	MODE	CHN

SIGNALS

		ZR	15044
CARBON	-0.002%	NR	15145
HYDROGEN	0.016%	CR	15190
NITROGEN	-0.035%	HR	16243
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	31 Seconds		

DATE & TIME	8/9/2016 2:37:02 PM	P_ID	080916AR
SAMPLE ID	162354919MS	USER ID	mansfield_toc1
WEIGHT (mg)	20.490	MODE	CHN

SIGNALS

		ZR	15024
CARBON	11.239%	NR	15881
HYDROGEN	1.987%	CR	50006
NITROGEN	18.211%	HR	63160
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	31 Seconds		

DATE & TIME	8/9/2016 2:41:52 PM	P_ID	080916AR
SAMPLE ID	162354919MS	USER ID	mansfield_toc1
WEIGHT (mg)	16.330	MODE	CHN

				SIGNALS
				ZR 15042
CARBON	11.384%			NR 15749
HYDROGEN	2.528%			CR 43311
NITROGEN	18.280%			HR 56641
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	32 Seconds			

DATE & TIME	8/9/2016 2:47:49 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.210	MODE	CHN

				SIGNALS
				ZR 15044
CARBON	0.825%			NR 15138
HYDROGEN	4.036%			CR 16458
NITROGEN	.633%			HR 29768
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	36 Seconds			

DATE & TIME	8/9/2016 2:52:45 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	62.310	MODE	CHN

				SIGNALS
				ZR 15055
CARBON	.004%			NR 15151
HYDROGEN	0.034%			CR 15191
NITROGEN	.088%			HR 16456
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	37 Seconds			

DATE & TIME	8/9/2016 3:11:23 PM	P_ID	080916AR
SAMPLE ID	162354904	USER ID	mansfield_toc1
WEIGHT (mg)	<del>5.660</del> 5.71	MODE	CHN

				SIGNALS
				ZR 15014
CARBON	<del>8.563%</del> 8.488			NR 15221
HYDROGEN	1.349%			CR 22462
NITROGEN	8.790%			HR 25433
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	30 Seconds			

DATE & TIME	8/9/2016 3:16:11 PM	P_ID	080916AR
SAMPLE ID	162354904	USER ID	mansfield_toc1
WEIGHT (mg)	<del>6.380</del> 6.43	MODE	CHN

SIGNALS

	ZR	15005
CARBON	<del>8.364%</del> 8.299	NR 15237
HYDROGEN	1.325%	CR 23202
NITROGEN	9.748%	HR 26425
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0	
FILL TIME	30 Seconds	

DATE & TIME	8/9/2016 4:18:50 PM	P_ID	080916AR
SAMPLE ID	162354908	USER ID	mansfield_toc1
WEIGHT (mg)	<del>5.290</del> 5.25	MODE	CHN

SIGNALS

	ZR	14984
CARBON	<del>7.497%</del> 7.55	NR 15236
HYDROGEN	1.249%	CR 21175
NITROGEN	13.637%	HR 23830
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0	
FILL TIME	31 Seconds	

DATE & TIME	8/9/2016 4:23:39 PM	P_ID	080916AR
SAMPLE ID	162354908	USER ID	mansfield_toc1
WEIGHT (mg)	<del>6.650</del> 6.60	MODE	CHN

SIGNALS

	ZR	14991
CARBON	<del>7.818%</del> 7.877	NR 15258
HYDROGEN	1.310%	CR 23020
NITROGEN	11.970%	HR 26323
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0	
FILL TIME	31 Seconds	

DATE & TIME	8/9/2016 4:28:29 PM	P_ID	080916AR
SAMPLE ID	162354911	USER ID	mansfield_toc1
WEIGHT (mg)	<del>6.580</del> 6.52	MODE	CHN

SIGNALS

	ZR	14996
CARBON	<del>4.226%</del> 4.265	NR 15184
HYDROGEN	0.655%	CR 19371
NITROGEN	6.124%	HR 21319

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	31 Seconds		

DATE & TIME	8/9/2016 4:33:18 PM	P_ID	080916AR
SAMPLE ID	162354911	USER ID	mansfield_toc1
WEIGHT (mg)	8.650 8.57	MODE	CHN

SIGNALS

ZR	14998
NR	15214
CR	21043
HR	23498

CARBON	<del>4.499%</del> 4.541
HYDROGEN	0.689%
NITROGEN	6.269%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	30 Seconds

DATE & TIME	8/9/2016 4:38:07 PM	P_ID	080916AR
SAMPLE ID	162354903	USER ID	mansfield_toc1
WEIGHT (mg)	9.890 9.08	MODE	CHN

SIGNALS

ZR	15003
NR	15217
CR	20322
HR	22606

CARBON	<del>3.742%</del> 3.746
HYDROGEN	0.594%
NITROGEN	5.856%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	30 Seconds

DATE & TIME	8/9/2016 4:42:56 PM	P_ID	080916AR
SAMPLE ID	162354903	USER ID	mansfield_toc1
WEIGHT (mg)	9.840 9.83	MODE	CHN

SIGNALS

ZR	15009
NR	15268
CR	21401
HR	24268

CARBON	<del>4.164%</del> 4.168
HYDROGEN	0.742%
NITROGEN	7.685%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	31 Seconds

DATE & TIME	8/9/2016 4:47:46 PM	P_ID	080916AR
SAMPLE ID	162354902	USER ID	mansfield_toc1
WEIGHT (mg)	12.880 12.90	MODE	CHN

				SIGNALS
				ZR 15009
CARBON	0.355%	354		NR 15128
HYDROGEN	0.219%			CR 15880
NITROGEN	0.464%			HR 17369
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	31 Seconds			

DATE & TIME	8/9/2016 4:52:36 PM	P_ID	080916AR
SAMPLE ID	162354902	USER ID	mansfield_toc1
WEIGHT (mg)	16.250 16.27	MODE	CHN

				SIGNALS
				ZR 15009
CARBON	0.300%	299		NR 15134
HYDROGEN	0.216%			CR 15930
NITROGEN	0.551%			HR 17633
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	31 Seconds			

DATE & TIME	8/9/2016 4:57:26 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.350	MODE	CHN

				SIGNALS
				ZR 15010
CARBON	0.901%			NR 15233
HYDROGEN	3.969%			CR 16687
NITROGEN	5.576%			HR 29955
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	32 Seconds			

DATE & TIME	8/9/2016 5:02:17 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	61.910	MODE	CHN

				SIGNALS
				ZR 15038
CARBON	1.002%			NR 15136
HYDROGEN	0.009%			CR 15191
NITROGEN	-0.072%			HR 15982
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	32 Seconds			

DATE & TIME	8/10/2016 8:09:57 AM	P_ID	080916AR
SAMPLE ID	16354901	USER ID	mansfield_toc1
WEIGHT (mg)	<del>16.610</del> 16.63	MODE	CHN

SIGNALS

	ZR	15035
CARBON	0.399%	NR 15901
HYDROGEN	0.338%	CR 16955
NITROGEN	22.734%	HR 19304
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0 0	
FILL TIME	28 Seconds	

DATE & TIME	8/10/2016 8:14:44 AM	P_ID	080916AR
SAMPLE ID	162354901	USER ID	mansfield_toc1
WEIGHT (mg)	<del>15.160</del> 15.18	MODE	CHN

SIGNALS

	ZR	15041
CARBON	0.387% 38%	NR 15368
HYDROGEN	0.331%	CR 16311
NITROGEN	7.220%	HR 18477
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0 0	
FILL TIME	28 Seconds	

DATE & TIME	8/10/2016 8:19:30 AM	P_ID	080916AR
SAMPLE ID	162354605	USER ID	mansfield_toc1
WEIGHT (mg)	<del>11.160</del> 11.12	MODE	CHN

SIGNALS

	ZR	15050
CARBON	1.956% 1.963	NR 15266
HYDROGEN	0.509%	CR 18568
NITROGEN	4.859%	HR 20938
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0 0	
FILL TIME	28 Seconds	

DATE & TIME	8/10/2016 8:24:17 AM	P_ID	080916AR
SAMPLE ID	162354605	USER ID	mansfield_toc1
WEIGHT (mg)	<del>10.620</del> 10.58	MODE	CHN

SIGNALS

	ZR	15038
CARBON	1.764% 1.771	NR 15197
HYDROGEN	0.466%	CR 18042
NITROGEN	2.436%	HR 20186

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 8:29:03 AM	P_ID	080916AR
SAMPLE ID	162354606	USER ID	mansfield_toc1
WEIGHT (mg)	15.370	MODE	CHN

				SIGNALS	
				ZR	15047
CARBON	1.487%			NR	15215
HYDROGEN	0.479%			CR	18670
NITROGEN	1.975%			HR	21558
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	28 Seconds				

DATE & TIME	8/10/2016 8:33:50 AM	P_ID	080916AR
SAMPLE ID	162354606	USER ID	mansfield_toc1
WEIGHT (mg)	16.190	MODE	CHN

				SIGNALS	
				ZR	15035
CARBON	1.242%			NR	15187
HYDROGEN	0.458%			CR	18234
NITROGEN	1.383%			HR	21138
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	28 Seconds				

DATE & TIME	8/10/2016 8:38:36 AM	P_ID	080916AR
SAMPLE ID	162354617	USER ID	mansfield_toc1
WEIGHT (mg)	7.760 <i>7.108</i>	MODE	CHN

				SIGNALS	
				ZR	15045
CARBON	14.254% <i>14.402</i>			NR	15523
HYDROGEN	2.444%			CR	31953
NITROGEN	23.786%			HR	38413
BLANKS	75	620	107		
K FACTORS	14.786	30.792	0.201		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	28 Seconds				

DATE & TIME	8/10/2016 8:43:23 AM	P_ID	080916AR
SAMPLE ID	162354617	USER ID	mansfield_toc1
WEIGHT (mg)	5.290 <i>5.24</i>	MODE	CHN



SIGNALS  
ZR 15045  
NR 15384  
CR 26223  
HR 30785

CARBON 13.762%  
HYDROGEN 2.420%  
NITROGEN 21.819%

BLANKS 75 620 107  
K FACTORS 14.786 30.792 0.201

FILL COMB BOOST1 BOOST2  
0 0 0 0

FILL TIME 28 Seconds

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DATE & TIME 8/10/2016 8:48:10 AM P\_ID 080916AR  
SAMPLE ID 162354618 USER ID mansfield\_toc1  
WEIGHT (mg) 5.680 5.69 MODE CHN

SIGNALS  
ZR 15042  
NR 15466  
CR 31132  
HR 36818

CARBON ~~18.564%~~ 18.531  
HYDROGEN 2.897%  
NITROGEN 27.766%

BLANKS 75 620 107  
K FACTORS 14.786 30.792 0.201

FILL COMB BOOST1 BOOST2  
0 0 0 0

FILL TIME 28 Seconds

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DATE & TIME 8/10/2016 8:52:56 AM P\_ID 080916AR  
SAMPLE ID 162354618 USER ID mansfield\_toc1  
WEIGHT (mg) 6.310 6.32 MODE CHN

SIGNALS  
ZR 15062  
NR 15529  
CR 33288  
HR 39891

CARBON ~~18.954%~~ 18.924  
HYDROGEN 3.079%  
NITROGEN 28.384%

BLANKS 75 620 107  
K FACTORS 14.786 30.792 0.201

FILL COMB BOOST1 BOOST2  
0 0 0 0

FILL TIME 28 Seconds

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DATE & TIME 8/10/2016 8:57:43 AM P\_ID 080916AR  
SAMPLE ID CCV USER ID mansfield\_toc1  
WEIGHT (mg) 10.190 MODE CHN

SIGNALS  
ZR 15054  
NR 15147  
CR 16530  
HR 27996

CARBON 0.868%  
HYDROGEN 3.457%  
NITROGEN -0.684%

BLANKS 75 620 107  
K FACTORS 14.786 30.792 0.201

FILL COMB BOOST1 BOOST2  
0 0 0 0

FILL TIME 28 Seconds

DATE & TIME	8/10/2016 9:02:30 AM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	52.020	MODE	CHN

SIGNALS

	ZR	15094
CARBON	-0.008%	NR 15175
HYDROGEN	0.006%	CR 15192
NITROGEN	-0.249%	HR 15910
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0	
FILL TIME	29 Seconds	

DATE & TIME	8/10/2016 9:07:56 AM	P_ID	080916AR
SAMPLE ID	162354619	USER ID	mansfield_toc1
WEIGHT (mg)	<del>10.620</del> 10.101	MODE	CHN

SIGNALS

	ZR	15075
CARBON	<del>2.490%</del> 2.442	NR 15290
HYDROGEN	0.594%	CR 19275
NITROGEN	5.059%	HR 21837
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0	
FILL TIME	34 Seconds	

DATE & TIME	8/10/2016 9:12:43 AM	P_ID	080916AR
SAMPLE ID	162354619	USER ID	mansfield_toc1
WEIGHT (mg)	<del>9.170</del> 9.10	MODE	CHN

SIGNALS

	ZR	15067
CARBON	<del>2.334%</del> 2.337	NR 15249
HYDROGEN	0.559%	CR 18489
NITROGEN	4.069%	HR 20687
BLANKS	75 620 107	
K FACTORS	14.786 30.792 0.201	
FILL	COMB BOOST1 BOOST2	
	0 0 0	
FILL TIME	28 Seconds	

DATE & TIME	8/10/2016 9:20:42 AM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.250	MODE	CHN

SIGNALS

	ZR	15059
CARBON	0.894%	NR 15136
HYDROGEN	4.113%	CR 16566
NITROGEN	-1.456%	HR 30168

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 9:25:29 AM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	86.470	MODE	CHN

SIGNALS

ZR	15069
NR	15142
CR	15171
HR	16119

CARBON	-004%
HYDROGEN	0.012%
NITROGEN	-0.196%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 10:48:38 AM	P_ID	080916AR
SAMPLE ID	162379117	USER ID	mansfield_toc1
WEIGHT (mg)	8.100	MODE	CHN

SIGNALS

ZR	15036
NR	15226
CR	16711
HR	18833

CARBON	1.177%
HYDROGEN	0.602%
NITROGEN	5.098%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 10:53:25 AM	P_ID	080916AR
SAMPLE ID	162379117	USER ID	mansfield_toc1
WEIGHT (mg)	8.570	MODE	CHN

SIGNALS

ZR	15039
NR	15181
CR	16583
HR	18629

CARBON	1.047%
HYDROGEN	0.540%
NITROGEN	2.032%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 10:58:12 AM	P_ID	080916AR
SAMPLE ID	162379118	USER ID	mansfield_toc1
WEIGHT (mg)	10.930	MODE	CHN

				SIGNALS			
				ZR	15033		
CARBON	1.106%			NR	15182		
HYDROGEN	0.535%			CR	17045		
NITROGEN	1.912%			HR	19464		
BLANKS	75	620	107				
K FACTORS	14.786	30.792	0.201				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	28 Seconds						

DATE & TIME	8/10/2016 11:02:58 AM	P_ID	080916AR
SAMPLE ID	162379118	USER ID	mansfield_toc1
WEIGHT (mg)	7.850	MODE	CHN

				SIGNALS			
				ZR	15047		
CARBON	0.974%			NR	15168		
HYDROGEN	0.478%			CR	16374		
NITROGEN	0.887%			HR	18150		
BLANKS	75	620	107				
K FACTORS	14.786	30.792	0.201				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	28 Seconds						

DATE & TIME	8/10/2016 11:07:45 AM	P_ID	080916AR
SAMPLE ID	162379119	USER ID	mansfield_toc1
WEIGHT (mg)	11.650	MODE	CHN

				SIGNALS			
				ZR	15043		
CARBON	1.044%			NR	15192		
HYDROGEN	0.558%			CR	17065		
NITROGEN	1.794%			HR	19686		
BLANKS	75	620	107				
K FACTORS	14.786	30.792	0.201				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	28 Seconds						

DATE & TIME	8/10/2016 11:12:32 AM	P_ID	080916AR
SAMPLE ID	162379119	USER ID	mansfield_toc1
WEIGHT (mg)	5.790	MODE	CHN

				SIGNALS			
				ZR	15053		
CARBON	1.135%			NR	15166		
HYDROGEN	0.432%			CR	16213		
NITROGEN	0.516%			HR	17604		
BLANKS	75	620	107				
K FACTORS	14.786	30.792	0.201				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	28 Seconds						

DATE & TIME	8/10/2016 11:17:19 AM	P_ID	080916AR
SAMPLE ID	162379120	USER ID	mansfield_toc1
WEIGHT (mg)	16.790	MODE	CHN

SIGNALS

	ZR	15039
CARBON	NR	15224
HYDROGEN	CR	18218
NITROGEN	HR	22120
BLANKS	75	620 107
K FACTORS	14.786	30.792 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	28 Seconds	

DATE & TIME	8/10/2016 11:22:06 AM	P_ID	080916AR
SAMPLE ID	162379120	USER ID	mansfield_toc1
WEIGHT (mg)	10.310	MODE	CHN

SIGNALS

	ZR	15063
CARBON	NR	15200
HYDROGEN	CR	16906
NITROGEN	HR	19511
BLANKS	75	620 107
K FACTORS	14.786	30.792 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	28 Seconds	

DATE & TIME	8/10/2016 11:26:53 AM	P_ID	080916AR
SAMPLE ID	162379120D	USER ID	mansfield_toc1
WEIGHT (mg)	6.970	MODE	CHN

SIGNALS

	ZR	15058
CARBON	NR	15178
HYDROGEN	CR	16382
NITROGEN	HR	18138
BLANKS	75	620 107
K FACTORS	14.786	30.792 0.201
FILL	COMB	BOOST1 BOOST2
	0	0 0
FILL TIME	28 Seconds	

DATE & TIME	8/10/2016 11:31:40 AM	P_ID	080916AR
SAMPLE ID	162379120D	USER ID	mansfield_toc1
WEIGHT (mg)	14.500	MODE	CHN

SIGNALS

	ZR	15062
CARBON	NR	15231
HYDROGEN	CR	17722
NITROGEN	HR	21216

BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 11:36:26 AM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.490	MODE	CHN

SIGNALS

ZR	15065
NR	15139
CR	16586
HR	29704

CARBON	0.885%
HYDROGEN	3.869%
NITROGEN	-1.565%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	28 Seconds

DATE & TIME	8/10/2016 11:41:14 AM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	39.700	MODE	CHN

SIGNALS

ZR	15073
NR	15163
CR	15181
HR	15883

CARBON	-0.10%
HYDROGEN	0.007%
NITROGEN	-2.13%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	29 Seconds

DATE & TIME	8/10/2016 11:47:11 AM	P_ID	080916AR
SAMPLE ID	162379120MS	USER ID	mansfield_toc1
WEIGHT (mg)	13.610	MODE	CHN

SIGNALS

ZR	15049
NR	15217
CR	19070
HR	32318

CARBON	1.877%
HYDROGEN	3.013%
NITROGEN	2.230%
BLANKS	75 620 107
K FACTORS	14.786 30.792 0.201
FILL	COMB BOOST1 BOOST2
	0 0 0
FILL TIME	29 Seconds

DATE & TIME	8/10/2016 11:51:58 AM	P_ID	080916AR
SAMPLE ID	162379120MS	USER ID	mansfield_toc1
WEIGHT (mg)	15.490	MODE	CHN

				SIGNALS
				ZR 15063
CARBON	1.810%			NR 15248
HYDROGEN	2.631%			CR 19468
NITROGEN	2.505%			HR 32639
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 11:56:45 AM	P_ID	080916AR
SAMPLE ID	162354604	USER ID	mansfield_toc1
WEIGHT (mg)	10.030	MODE	CHN

				SIGNALS
				ZR 15082
CARBON	1.272%			NR 15194
HYDROGEN	0.500%			CR 17156
NITROGEN	0.248%			HR 19321
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	28 Seconds			

DATE & TIME	8/10/2016 12:01:33 PM	P_ID	080916AR
SAMPLE ID	162354604	USER ID	mansfield_toc1
WEIGHT (mg)	17.310	MODE	CHN

				SIGNALS
				ZR 15064
CARBON	1.356%			NR 15207
HYDROGEN	0.375%			CR 18753
NITROGEN	1.035%			HR 21372
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/10/2016 12:06:20 PM	P_ID	080916AR
SAMPLE ID	SRM1944	USER ID	mansfield_toc1
WEIGHT (mg)	8.740	MODE	CHN

				SIGNALS
				ZR 15063
CARBON	4.066%			NR 15241
HYDROGEN	0.513%			CR 20570
NITROGEN	4.042%			HR 22571
BLANKS	75	620	107	
K FACTORS	14.786	30.792	0.201	
FILL	COMB	BOOST1	BOOST2	
	0	0	0	
FILL TIME	29 Seconds			

DATE & TIME	8/10/2016 12:11:07 PM	P_ID	080916AR
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	52.960	MODE	CHN

SIGNALS			
		ZR	15053
CARBON	0.005%	NR	15134
HYDROGEN	-0.19%	CR	15248
NITROGEN	-.244%	HR	15562
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	29 Seconds		

DATE & TIME	8/10/2016 12:15:54 PM	P_ID	080916AR
SAMPLE ID	SRM1944	USER ID	mansfield_toc1
WEIGHT (mg)	6.690	MODE	CHN

SIGNALS			
		ZR	15054
CARBON	3.770%	NR	15202
HYDROGEN	0.333%	CR	19006
NITROGEN	3.049%	HR	20313
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	8/10/2016 12:20:46 PM	P_ID	080916AR
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	82.910	MODE	CHN

SIGNALS			
		ZR	15044
CARBON	-.002%	NR	15129
HYDROGEN	-.014%	CR	15180
NITROGEN	-.132%	HR	15431
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
	0	0	0
FILL TIME	34 Seconds		

DATE & TIME	8/10/2016 12:25:38 PM	P_ID	080916AR
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.580	MODE	CHN

SIGNALS			
		ZR	15059
CARBON	0.906%	NR	15163
HYDROGEN	3.908%	CR	16656
NITROGEN	-.141%	HR	30008



BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	34 Seconds		

DATE & TIME	8/10/2016 12:30:30 PM	P_ID	080916AR
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	53.300	MODE	CHN

SIGNALS

		ZR	15080
CARBON	-007%	NR	15165
HYDROGEN	0.019%	CR	15186
NITROGEN	-205%	HR	16115
BLANKS	75	620	107
K FACTORS	14.786	30.792	0.201
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	34 Seconds		

# **Work Group**

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 15 2016, 09:48 am

Work Group: WG921180 for Department: 7 Wet Chemistry

Created: 09-AUG-16 Due: Operator: AR

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623546-10	W-65-HIGH_072516_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-11	W-65-INTERTIDAL_0725	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-12	W-65-LOW_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-13	W-65-MID_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623546-14	ES-15_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-15	SVE-01_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-12	W-21-HIGH_072516_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-13	W-21-INTERTIDAL_0725	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-14	W-21-LOW_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-15	W-21-MID_072516_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
L1623549-16	W-21UM-CENTRAL-C_072	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-17	W-21UM-EAST-C_072516	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0819	S0	Glass-A.06
WG921180-1	Laboratory Method Bl	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-3	Duplicate Sample	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-4	Matrix Spike	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921180-5	Matrix Spike Duplica	S A2-TOC-LK-2REPS	SOIL	DONE	U				
Comments:									
WG921180-3	L1623549-14								
WG921180-4	L1623549-14								
WG921180-5	L1623549-14								

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 15 2016, 09:48 am

Work Group: WG921994 for Department: 7 Wet Chemistry

Created: 11-AUG-16 Due: Operator: AR

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623546-04	W-61-MID_072716_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623546-05	W-63-HIGH_072116_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-06	W-63-HIGH_072116_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-17	W17-N_072116_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-18	ADD-01_072116_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623546-19	ADD-02_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-01	OV-04_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-02	OV-01_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-03	OV-02_072216_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0805	0819	S0	Glass-A.06
L1623549-04	BO-05_072016_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0803	0819	S0	Glass-A.06
L1623549-05	OB-05_072616_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623549-06	ES-02_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-07	ES-13_072716_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-08	W-17-HIGH_072116_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623549-09	W-17-INTERTIDAL_0726	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623549-10	W-17-LOW_072616_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0809	0819	S0	Glass-A.06
L1623549-11	W-17-MID_072116_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0804	0819	S0	Glass-A.06
L1623549-18	W-21UM-SOUTH_072716_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
L1623549-19	W-21UM-WEST-A_07/27/	S A2-TOC-LK-2REPS	SOIL	DONE	U	0810	0819	S0	Glass-A.06
WG921994-1	Laboratory Method B1	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921994-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921994-3	Duplicate Sample	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG921994-4	Matrix Spike	S A2-TOC-LK-2REPS	SOIL	DONE	U				

Comments:

WG921994-3 L1623549-19  
 WG921994-4 L1623549-19

# Sample Preparation



TOC Instrument: #1 SN: 241N8102003 #3 - SN: 241L1308211  
 (Circle one) #2 - SN: 241N9041221

Date: 8/16  
 Analyst: AR/CA  
 2° Review:

CV ID: WNW05116 A - E  
 SRM 1944 ID: WNS081814 A  
 Filter Aid ID: WNS120411 SA

ICV ID: WNW05116 F  
 Balance ID:  
 Other SRM ID: 001712

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std	K			01	10.12
Blank				02	83.85
K-Factor	0			03	10.05
Blank	1000			04	10.04
K-Factor	5000			05	10.40
K-Factor	10000			06	10.10
ICV	20000			07	10.44
ICV	40000			08	10.60
LES	ICV			09	10.20
Blank	ICB			10	74.18
	HICV			11	52.02
	SRM 1944			12	7.55
	MB			13	164.11
	SRM 1944			14	8.37
	MB			15	74.65
L1623546	10			16	15.64
	10			17	13.15
	11			18	19.42
CCV	11			19	18.78
CCB	12			20	19.51
	12			21	12.84
CCV				22	10.61

Document Type: Form + 3549  
 #3546 needs wt correction

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
CCB				23	89.25
L1623546	13			24	8.08
	13			25	9.43
	14			26	11.63
	14			27	15.64
	15			28	11.12
	15			29	6.87
L1623549	12			30	7.93
CCV	12			31	9.44
CCB	13			32	15.57
	13			33	14.06
CCV				34	10.28
CCB				35	55.72
L1623549	14			36	6.35
	14			37	6.48
	14D			38	8.00
	14D			39	5.01
	14MS	10.23		40	11.19
	14MS	10.31		41	11.22
	14MSD	10.22		42	5.92
	14MSD	10.54		43	6.34
CCV	15			44	7.70
CCB					

8.69

TOC Instrument: #1 - SN: 241N8102003 #3 - SN: 241L1308211  
(Circle one) #2 - SN: 241N9041221

Date: 8/8/16 ICV ID: \_\_\_\_\_  
Analyst: \_\_\_\_\_ Balance ID: \_\_\_\_\_  
SRM 1944 ID: \_\_\_\_\_ Other SRM ID: \_\_\_\_\_  
Filter Aid ID: \_\_\_\_\_

2° Review: \_\_\_\_\_

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor					
Blank					
K Factor					
K Factor					
ICV					
ICB					
LCS					
Blank					
L1623549	15			45	13.13
CCV				46	10.25
CCB				47	65.65
				48	14.30
	15RR			49	10.91
	15RR			48	10.00
CCV				49	38.70
CCB				50	14.30
L1623549	15RR			51	10.91
CCV				52	7.41
CCB	16			53	5.93
	16			54	7.30
	17				

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
L1623549	17			55	9.52
L1624074	01			56	23.38
	01			57	14.15
	02			58	10.90
	02			59	15.73
CCV				60	10.34
CCB				61	52.50
L1624074	03			62	14.81
CCV	03			63	10.33
CCB	04			64	6.28
	04			65	8.41
	05			66	10.31
	05			67	8.45
	06			68	7.53
	06			69	6.54
	02RR			70	13.21
	02RR			71	11.19
CCV				72	10.37
CCB				73	10.90
L1624074	03				
CCV	03				
CCB	04				





TOC Instrument: #1  
(Circle one) #2

#3 - SN: 241L1308211

SN: 241N8102003

SN: 241N9041221

Date: 8/9/16  
Analyst: CMB  
2° Review:

CCV ID: WNW051116 A-E  
SRM 1944 ID: W5081814 A  
Filter Aid ID: W5120405 A

ICV ID: WNW051116 F  
Balance ID: 005712  
Other SRM ID:

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std				01	7.50
Blank K				02	10.35
K Factor Blank				03	58.49
Blank K				04	10.20
K Factor				05	10.32
K Factor				06	62.69
ICV 10000				07	10.30
ICV 1000				08	10.41
ICV 5000				09	10.38
Blank 10000				10	10.51
20000				11	10.82
40000				12	11.20
ICV				13	10.60
ICB				14	10.72
HICV				15	52.19
SRM				16	13.84
MB				17	63.03
SRM				18	7.86
ICV MB				19	53.51
ICV 1623519.05				20	9.60
				21	10.86
				22	14.03

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
L1623519	06			23	12.48
	07			24	13.78
	07			25	16.28
CCV				26	10.58
CCB				27	81.07
L1623519	09			28	12.31
	09			29	12.86
	10			30	9.76
	10			31	11.31
ICV				32	12.29
CCB				33	20.03
	18			34	15.68
	18			35	16.75
	19			36	14.40
	19			37	15.60
	19D			38	10.30
CCV				39	86.44
CCB				40	20.49
	19MS	10.04		41	16.33
	19MS	10.33		42	10.21
CCV				43	62.31
CCB				44	5.66
ICV 1623519	04				

TOC Instrument: #1 - SN: 241N8102003 #3 - SN: 241L1308211  
(Circle one) #2 - SN: 241N9041221

Date: 8/9/16 ICV ID: \_\_\_\_\_  
Analyst: \_\_\_\_\_ Balance ID: \_\_\_\_\_  
SRM 1944 ID: \_\_\_\_\_ Other SRM ID: \_\_\_\_\_  
Filter Aid ID: \_\_\_\_\_

2° Review: \_\_\_\_\_

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor					
Blank <u>L1623549</u>	04			45	4.38
K Factor	08			46	5.29
K Factor	08			47	4.65
CCV	11			48	6.58
CCB	11			49	8.05
CCV	03			50	9.09
CCB	03			51	9.84
CCV	02			52	12.88
CCB	02			53	14.25
CCV				54	10.35
CCB				55	61.91
L1623549	01			56	16.61
	01			57	15.14
L1623546	05			58	11.16
	05			59	10.62
CCV	06			60	15.37
CCB	06			61	16.19
	17			62	7.76
	17			63	5.29

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
L1623546	18			64	5.68
	18			65	6.31
CCV				66	10.19
CCB				67	52.02
L1623546	19			68	10.62
	19			69	9.17
CCV				70	10.25
CCB				71	86.47
CCV	17			01	8.10
CCB	17			02	8.57
	18			03	10.93
	18			04	7.85
	19			05	11.65
	19			06	5.79
	20			07	16.79
	20			08	16.31
	20D			09	6.97
	20D			10	14.50
CCV				11	10.49
CCB				12	39.70
CCV SRM	20MS	1054		13	13.61
CCB SRM	20MS	1053		14	15.49



# Alpha Report





## ANALYTICAL REPORT

Lab Number:	L1623549
Client:	AMEC Foster Wheeler E & I, Inc. 511 Congress Street P.O. Box 7050 Portland, ME 04112-7050
ATTN:	Rod Pendleton
Phone:	(207) 828-3692
Project Name:	PENOBSCOT RIVER ESTUARY
Project Number:	3616166052
Report Date:	08/16/16

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Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1623549-01	OV-04_072216_SED_03	SEDIMENT	Not Specified	07/22/16 09:35	07/29/16
L1623549-02	OV-01_072216_SED_03	SEDIMENT	Not Specified	07/22/16 11:22	07/29/16
L1623549-03	OV-02_072216_SED_03	SEDIMENT	Not Specified	07/22/16 10:33	07/29/16
L1623549-04	BO-05_072016_SED_03	SEDIMENT	Not Specified	07/20/16 14:00	07/29/16
L1623549-05	OB-05_072616_SED_03	SEDIMENT	Not Specified	07/26/16 12:00	07/29/16
L1623549-06	ES-02_072716_SED_03	SEDIMENT	Not Specified	07/27/16 08:50	07/29/16
L1623549-07	ES-13_072716_SED_03	SEDIMENT	Not Specified	07/27/16 11:30	07/29/16
L1623549-08	W-17-HIGH_072116_SED_03	SEDIMENT	Not Specified	07/21/16 09:25	07/29/16
L1623549-09	W-17-INTERTIDAL_072616_SED_03	SEDIMENT	Not Specified	07/26/16 14:30	07/29/16
L1623549-10	W-17-LOW_072616_SED_03	SEDIMENT	Not Specified	07/26/16 14:45	07/29/16
L1623549-11	W-17-MID_072116_SED_03	SEDIMENT	Not Specified	07/21/16 10:00	07/29/16
L1623549-12	W-21-HIGH_072516_SED_03	SEDIMENT	Not Specified	07/25/16 13:40	07/29/16
L1623549-13	W-21-INTERTIDAL_072516_SED_03	SEDIMENT	Not Specified	07/25/16 14:45	07/29/16
L1623549-14	W-21-LOW_072516_SED_03	SEDIMENT	Not Specified	07/25/16 14:05	07/29/16
L1623549-15	W-21-MID_072516_SED_03	SEDIMENT	Not Specified	07/25/16 15:00	07/29/16
L1623549-16	W-21UM-CENTRAL-C_072716_SED_03	SEDIMENT	Not Specified	07/27/16 11:47	07/29/16
L1623549-17	W-21UM-EAST-C_072516_SED_03	SEDIMENT	Not Specified	07/25/16 13:50	07/29/16
L1623549-18	W-21UM-SOUTH_072716_SED_03	SEDIMENT	Not Specified	07/27/16 10:08	07/29/16
L1623549-19	W-21UM-WEST-A_07/27/16_SED_03	SEDIMENT	Not Specified	07/27/16 11:02	07/29/16

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.


#### Total Organic Carbon

The WG921180-4/-5 MS/MSD recovery (Rep1 - 177%) / (Rep2 - 64% / 73%), performed on L1623549-14, does not apply because the sample concentration is greater than four times the spike amount added.

The WG921994-4 MS recovery (Rep1 - 265%) / (Rep2 - 137%), performed on L1623549-19, does not apply because the sample concentration is greater than four times the spike amount added.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 08/16/16



# **INORGANICS & MISCELLANEOUS**

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-01  
**Client ID:** OV-04\_072216\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/22/16 09:35  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	0.444		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	0.432		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	77.4		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-02  
**Client ID:** OV-01\_072216\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/22/16 11:22  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	0.398		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	0.336		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	89.2		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-03  
**Client ID:** OV-02\_072216\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/22/16 10:33  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	4.14		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	4.60		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	40.2		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-04  
**Client ID:** BO-05\_072016\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/20/16 14:00  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	9.36		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	9.15		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	20.6		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-05  
**Client ID:** OB-05\_072616\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 12:00  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	5.75		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	5.74		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	35.4		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-06  
**Client ID:** ES-02\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 08:50  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	7.41		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	7.32		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	33.7		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-07  
**Client ID:** ES-13\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 11:30  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	3.18		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	2.74		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	48.8		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP





**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-08  
**Client ID:** W-17-HIGH\_072116\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/21/16 09:25  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	8.34		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	8.69		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	31.2		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-09  
**Client ID:** W-17-INTERTIDAL\_072616\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 14:30  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	1.60		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	1.71		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	62.2		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-10  
**Client ID:** W-17-LOW\_072616\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/26/16 14:45  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.55		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	2.58		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	47.4		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-11  
**Client ID:** W-17-MID\_072116\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/21/16 10:00  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	4.71		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	5.01		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	46.4		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-12  
**Client ID:** W-21-HIGH\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 13:40  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	7.81		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	7.91		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	26.8		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-13  
**Client ID:** W-21-INTERTIDAL\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 14:45  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	5.23		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	5.02		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	42.2		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-14  
**Client ID:** W-21-LOW\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 14:05  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	6.68		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	7.52		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	45.5		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-15  
**Client ID:** W-21-MID\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 15:00  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	5.84		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	5.71		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	39.4		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP





**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-16  
**Client ID:** W-21UM-CENTRAL-C\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 11:47  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	13.8		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	13.1		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	20.5		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-17  
**Client ID:** W-21UM-EAST-C\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 13:50  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	5.75		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	5.80		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	32.2		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-18  
**Client ID:** W-21UM-SOUTH\_072716\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 10:08  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	10.8		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	11.0		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	24.9		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623549-19  
**Client ID:** W-21UM-WEST-A\_07/27/16\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/27/16 11:02  
**Date Received:** 07/29/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	11.1		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	11.6		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	14.4		%	0.100	0.100	1	-	08/01/16 11:05	121,2540G	SP



Project Name: PENOBSCOT RIVER ESTUARY

Lab Number: L1623549

Project Number: 3616166052

Report Date: 08/16/16

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab for sample(s): 12-17 Batch: WG921180-1</b>										
Total Organic Carbon (Rep1)	ND		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
Total Organic Carbon (Rep2)	ND		%	0.050	0.050	1	-	08/08/16 10:36	13,-	CM
<b>Total Organic Carbon - Mansfield Lab for sample(s): 01-11,18-19 Batch: WG921994-1</b>										
Total Organic Carbon (Rep1)	ND		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM
Total Organic Carbon (Rep2)	ND		%	0.050	0.050	1	-	08/09/16 12:01	13,-	CM

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 12-17 QC Batch ID: WG921180-4 WG921180-5 QC Sample: L1623549-14 Client ID: W-21-LOW_072516_SED_03												
Total Organic Carbon (Rep1)	6.68	0.903	8.28	177	Q	8.67	117		75-125	5		25
Total Organic Carbon (Rep2)	7.52	0.908	8.10	64	Q	8.40	73	Q	75-125	4		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-11,18-19 QC Batch ID: WG921994-4 QC Sample: L1623549-19 Client ID: W-21UM-WEST-A_07/27/16_SED_03												
Total Organic Carbon (Rep1)	11.1	0.49	12.4	265	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	11.6	0.657	12.5	137	Q	-	-		75-125	-		25

### Lab Duplicate Analysis Batch Quality Control

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-19 QC Batch ID: WG918874-1 QC Sample: L1623549-01 Client ID: OV-04_072216_SED_03						
Solids, Total	77.4	78.2	%	1		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 12-17 QC Batch ID: WG921180-3 QC Sample: L1623549-14 Client ID: W-21-LOW_072516_SED_03						
Total Organic Carbon (Rep1)	6.68	7.11	%	6		25
Total Organic Carbon (Rep2)	7.52	6.77	%	10		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-11,18-19 QC Batch ID: WG921994-3 QC Sample: L1623549-19 Client ID: W-21UM-WEST-A_07/27/16_SED_03						
Total Organic Carbon (Rep1)	11.1	11.7	%	5		25
Total Organic Carbon (Rep2)	11.6	11.8	%	2		25



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

### S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG921180-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	115		75-125
Total Organic Carbon (Rep2)	104		75-125



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

### S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG921994-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	103		75-125
Total Organic Carbon (Rep2)	95		75-125

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Present/Intact

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1623549-01A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-02A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-03A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-04A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-05A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-06A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-07A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-08A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-09A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-10A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-11A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-12A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-13A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-14A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-15A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-16A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-17A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-18A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623549-19A	Glass 60mL/2oz unpreserved	A	N/A	2.5	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)

\*Values in parentheses indicate holding time in days



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623549  
**Report Date:** 08/16/16

## REFERENCES

- 13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 7

Department: **Quality Assurance**

Published Date: 8/5/2016 11:25:56 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

**Certification Information**

The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility****EPA 624:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.**EPA 300:** DW: Bromide**EPA 6860:** NPW and SCM: Perchlorate**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation**EPA 9012B:** NPW: Total Cyanide**EPA 9050A:** NPW: Specific Conductance**SM3500:** NPW: Ferrous Iron**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**SM5310C:** DW: Dissolved Organic Carbon**Mansfield Facility****SM 2540D:** TSS**EPA 3005A** NPW**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility:****Drinking Water****EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.****EPA 624:** Volatile Halocarbons & Aromatics,**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.****Mansfield Facility:****Drinking Water****EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

## Chain Of Custody/Analysis Request Form

**USDC - Penobscot River**

**Lab: Alpha**

L1623549

AMEC, Suite 200, 511 Congress  
Street, Portland, ME

Tech Lead - Louise Venne  
Work# 770-421-3461

Proj Chemist - Denise King  
508-789-1738

AMEC Job Number = 3616166052

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media	Method	Fraction
23549 .01	1534	7/22/2016	9:35	OV-04_072216_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.02	1535	7/22/2016	11:22	OV-01_072216_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.03	1536	7/22/2016	10:33	OV-02_072216_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.04	1537	7/20/2016	14:00	BO-05_072016_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.05	1538	7/26/2016	12:00	OB-05_0072616_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.06	1540	7/27/2016	8:50	ES-02_072716_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.07	1541	7/27/2016	11:30	ES-13_072716_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.08	1548	7/21/2016	9:25	W-17-High_072116_SED_03		1					
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

Thursday, July 28, 2016

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L1623549

23549

<i>Samp #</i>	<i>Sample Date</i>	<i>Sample Time</i>	<i>Field Sample ID</i>	<i>QC Code</i>	<i>Qty Total</i>	<i>Qty Each</i>	<i>Bottle Size and Material Preservative Media Method</i>				<i>Fraction</i>	
.09	1549	7/26/2016	14:30	W-17-Intertidal_072616_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.10	1550	7/26/2016	14:45	W-17-Low_072616_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.11	1551	7/21/2016	10:00	W-17-Mid_072116_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.12	1552	7/25/2016	13:40	W-21-High_072516_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.13	1553	7/25/2016	14:45	W-21-Intertidal_072516_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.14	1554	7/25/2016	14:05	W-21-Low_072516_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.15	1558	7/25/2016	15:00	W-21-Mid_072516_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.16	1559	7/27/2016	11:47	W-21UM-Central-C_072716_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.17	1560	7/25/2016	13:50	W-21UM-East-C_072516_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.18	1561	7/27/2016	10:08	W-21UM-South_072716_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.19	1562	7/27/2016	11:02	W-21UM-West-A_07/27/16_SED_03	1							
				FS	1	2	oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

Thursday, July 28, 2016

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Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media Method	Fraction
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QC Codes: FS = Field Sample, EB = Equipment Rinsate Blank, MS - Matrix Spike, MSD = Matrix Spike Duplicate

Relinquished: Matthew Matti Date: 07 / 28 / 2016 Time: 1400

Received: Guest AM Date: 7 / 29 / 16 Time: 10:18

Relinquished AK 7/29/16 14:45 Rec: Kim O'Beirne 7/29/16 14:45

AIRBILL: 8045 4405 6908

- ONE COOLER



[www.alphalab.com](http://www.alphalab.com)



Lab Number: L1623926

Client: AMEC Foster Wheeler E & I, Inc.

ATTN: Rod Pendleton

Project Name: PENOBSCOT RIVER ESTUARY

Project Number: 3616166052

*The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.*

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# **Sample Delivery Group Information**





# Sample Delivery Group Form

Laboratory Job number: L1623926

Project Manager: Elizabeth Porta

Review Date: 08/03/2016

Project Number: 3616166052

Project Name: PENOBSCOT RIVER ESTUARY

Received: 08/02/2016 10:32

Client Account: AMEC Foster Wheeler E & I, Inc.

Received by: KB

Samples Delivered by: FEDEX

Call Tracker #

Bill Of Laden Yes

Trackingnum 804544056893

Coc Present Present

Container Status Intact

Sample IDs

All Containers Accounted For? Yes

Were Extra Samples Received? No

Do Sample Labels and COC agree? Yes

Are Samples in Appropriate Containers? Yes

Are Samples Received within Holding time? Yes

pH of Samples upon Receipt N/A

Are samples Properly Preserved? Yes

Initial pH preserved in house with

Final pH

Other Issues

Chlorine Check N/A

Are VOA/VPH Vials Present? No

Aqueous: Do Vials Contain Head Space? N/A

Soils: Is MeOH Covering the Soil? N/A

Reagent H2O Preserved vials Frozen on N/A

Frozen by Client N/A

Cooler	Seal	Ice Present	Blue Ice Present	Temp. (Celsius)	Frozen upon Receipt	Delivered Direct from Site
A	Absent	Yes	No	4.4 - IR Gun	No	No

# **LIMS Chain of Custody**



ALPHA ANALYTICAL LABORATORIES, INC.  
LOGIN CHAIN OF CUSTODY REPORT  
Aug 17 2016, 02:26 pm

Login Number: L1623926

Account: AMEC-ME AMEC Foster Wheeler E & I, Inc. Project: 3616166052

Sample #      Client ID      Received: 02AUG16      Due Date: 23AUG16  
   Mat PR Collected      Container

---

L1623926-01 BO-04\_072516\_SED\_03 3 S0 25JUL16 11:30 3-Glass-A.06  
L1623926-01 MS L1623926-01 MSD DPKG-FULL Package Due Date: 08/23/16  
A2-TOC-LK-2REPS,A2-TS,DPKG-FULL,MS/MSD  
L1623926-02 BO-04\_072516\_SED\_03 3 S0 25JUL16 11:30 1-Glass-A.06  
| Package Due Date: 08/23/16  
A2-TOC-LK-2REPS,A2-TS  
L1623926-03 ES-04\_072816\_SED\_03 3 S0 28JUL16 10:30 1-Glass-A.06  
| Package Due Date: 08/23/16  
A2-TOC-LK-2REPS,A2-TS  
L1623926-04 ES-01-01\_072816\_SED 3 S0 28JUL16 11:40 1-Glass-A.06  
| Package Due Date: 08/23/16  
A2-TOC-LK-2REPS,A2-TS  
L1623926-05 ES-01-03\_072816\_SED 3 S0 28JUL16 15:10 1-Glass-A.06  
| Package Due Date: 08/23/16  
A2-TOC-LK-2REPS,A2-TS  
L1623926-06 ES-01-04\_072816\_SED 3 S0 28JUL16 15:50 1-Glass-A.06  
| Package Due Date: 08/23/16  
A2-TOC-LK-2REPS,A2-TS  
L1623926-07 ES-03\_072816\_SED\_03 3 S0 28JUL16 11:20 1-Glass-A.06  
| Package Due Date: 08/23/16

---

ALPHA ANALYTICAL LABORATORIES, INC.  
LOGIN CHAIN OF CUSTODY REPORT  
Aug 17 2016, 02:26 pm

Login Number: L1623926

Account: AMEC-ME AMEC Foster Wheeler E & I, Inc. Project: 3616166052

Sample #      Client ID      Received: 02AUG16      Due Date: 23AUG16  
   Mat PR Collected      Container

---

A2-TOC-LK-2REPS,A2-TS

L1623926-08 ES-FP\_072816\_SED\_03 3 S0 28JUL16 14:30 1-Glass-A.06

| Package Due Date: 08/23/16

A2-TOC-LK-2REPS,A2-TS

L1623926-09 ES-FP\_072816\_SED\_03 3 S0 28JUL16 14:30 1-Glass-A.06

| Package Due Date: 08/23/16

A2-TOC-LK-2REPS,A2-TS

L1623926-10 MMPOLY\_072916\_SED\_0 3 S0 29JUL16 14:30 1-Glass-A.06

| Package Due Date: 08/23/16

A2-TOC-LK-2REPS,A2-TS

L1623926-11 L9-45\_072816\_SED\_03 3 S0 28JUL16 09:30 1-Glass-A.06

| Package Due Date: 08/23/16

A2-TOC-LK-2REPS,A2-TS



# Container Tracking



**ALPHA ANALYTICAL LABORATORIES**  
**Container Tracking Report**

Container ID	Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1623926-01A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-01A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-01A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-01A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-01B	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-01B	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-01B	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-01B	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-01B	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-01B	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Kim L. Bailey	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Kim L. Bailey
L1623926-01C	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-01C	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-01C	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-01C	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Kim L. Bailey	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Kim L. Bailey
L1623926-02A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-02A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-02A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-02A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-02A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-02A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-03A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-03A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-03A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-03A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-03A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey

Container ID	Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1623926-03A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-04A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-04A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-04A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-04A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-04A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-04A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-05A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-05A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-05A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-05A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-05A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-05A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-06A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-06A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-06A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-06A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-06A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-06A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-07A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-07A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-07A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-07A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-07A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-07A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read

Container ID	Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1623926-08A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-08A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-08A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-08A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-08A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-08A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-09A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-09A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-09A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-09A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-09A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-09A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-10A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-10A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-10A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-10A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-10A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-10A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1623926-11A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Ashley Roulx	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Ashley Roulx
L1623926-11A	Glass-A.06	INTACT	10-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-FRZ1-Z3	Ashley Roulx	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Ashley Roulx
L1623926-11A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1623926-11A	Glass-A.06	INTACT	03-AUG-16	A2-CUSTODY-REFRIDGE	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1623926-11A	Glass-A.06	INTACT	03-AUG-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1623926-11A	Glass-A.06	INTACT	03-AUG-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read

# Chain of Custody



L1623926

# Chain Of Custody/Analysis Request Form

## USDC - Penobscot River

## Lab: Alpha

AMEC, Suite 200, 511 Congress Street, Portland, ME

Tech Lead - Louise Venne  
Work# 770-421-3461

Proj Chemist - Denise King  
508-789-1738

AMEC Job Number = 3616166052

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media	Method	Fraction
23926 .01	1590	7/25/2016	11:30	BO-04_072516_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.02	1591	7/25/2016	11:30	BO-04_072516_SED_03_DUP	1						
				FD	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.01	1592	7/25/2016	11:30	BO-04_072516_SED_03_MS	1						
				MS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.01	1593	7/25/2016	11:30	BO-04_072516_SED_03_MD	1						
				MSD	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

QC Codes: FS = Field Sample, EB = Equipment Rinsate Blank, MS - Matrix Spike, MSD = Matrix Spike Duplicate

Relinquished: [Signature] Date: 08/01/2016 Time: 14:00

Received: [Signature] Date: 8/2/16 Time: 10:30

Relinq PK 8/2/16 14:30  
\* - QC sample

Rec'd Kenn O'Brien 8/2/16 14:30

L1623926

## Chain Of Custody/Analysis Request Form

**USDC - Penobscot River**

**Lab: Alpha**

AMEC, Suite 200, 511 Congress Street, Portland, ME

Tech Lead - Louise Venne  
Work# 770-421-3461

Proj Chemist - Denise King  
508-789-1738

AMEC Job Number = 3616166052

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media	Method	Fraction
2392603	7/28/2016	10:30	ES-04_072816_SED_03		1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.04	7/28/2016	11:40	E-01-01_072816_SED_03		1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.05	7/28/2016	15:10	E-01-03_072816_SED_03		1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.06	7/28/2016	15:50	E-01-04_072816_SED_03		1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.07	7/28/2016	11:20	ES-03_072816_SED_03		1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.08	7/28/2016	14:30	ES-FP_072816_SED_03		1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.09	7/28/2016	14:30	ES-FP_072816_SED_03_DUP		1						
				FD	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.10	7/29/2016	14:30	MMPOLY_072916_SED_03		1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

Monday, August 01, 2016

Page 1 of 2

L1623926

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media Method	Fraction
1584	7/28/2016	9:30	L9-45_072816_SED_03	FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T

23926.11

QC Codes: FS = Field Sample, EB = Equipment Rinsate Blank, MS - Matrix Spike, MSD = Matrix Spike Duplicate

Relinquished: Matthew Moran Date: 08 / 01 / 2016 Time: 0900

Received: [Signature] Date: 8 / 2 / 16 Time: 10:32

Relinquish: f.k. 8/2/16 14:30 Rec'd Kim Bailey 8/2/16 1430



# Wet Chemistry



# **Total Solids / Percent Moisture Analysis**

# Sample Raw Data



# **Work Group**

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 04 2016, 04:17 pm

Work Group: WG919609 for Department: 7 Wet Chemistry

Created: 03-AUG-16 Due: Operator: sp

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623926-01	BO-04_072516_SED_03	S A2-TS	SOIL	DONE	U	0801	0823	S0	Glass-A.06
L1623926-02	BO-04_072516_SED_03-	S A2-TS	SOIL	DONE	U	0801	0823	S0	Glass-A.06
L1623926-03	ES-04_072816_SED_03	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
L1623926-04	ES-01-01_072816_SED_	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
L1623926-05	ES-01-03_072816_SED_	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
L1623926-06	ES-01-04_072816_SED_	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
L1623926-07	ES-03_072816_SED_03	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
L1623926-08	ES-FP_072816_SED_03	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
L1623926-09	ES-FP_072816_SED_03-	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
L1623926-10	MMPOLY_072916_SED_03	S A2-TS	SOIL	DONE	U	0805	0823	S0	Glass-A.06
L1623926-11	L9-45_072816_SED_03	S A2-TS	SOIL	DONE	U	0804	0823	S0	Glass-A.06
WG919609-1	Duplicate Sample	S A2-TS	SOIL	DONE	U				

Comments:

WG919609-1 L1623926-01

# **Organic Carbon Analysis**

# Sequence Logs



Date of report: 8/15/2016 7:59 AM  
 User ID: Alpha Analytical

Run	Run Details			Results				Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
K1	1	10.260	8/12/2016 8:05:11 A	15.068	1.368	1.499	26971	30348	30994	2878	
BLANK	2		8/12/2016 8:10:06 A	22	-80	433	26889	27344	27264	2732	
K1	3	10.250	8/12/2016 8:35:13 A	13.268	2.015	0.257	26907	28614	29583	2723	
K1	4	10.320	8/12/2016 8:44:53 A	19.467	2.354	0.061	26876	28998	30150	2697	
K1	5	10.200	8/12/2016 8:53:29 A	18.206	1.974	0.207	26868	29010	29953	2713	
K1	6	10.140	8/12/2016 8:58:24 A	19.704	2.245	-0.11	26856	28880	29955	2686	
0	7	10.110	8/12/2016 9:07:24 A	-0.25%	7.474%	2.876%	26858	27079	28589	2710	
1000	8	10.090	8/12/2016 9:12:20 A	0.111%	7.726%	2.381%	26842	27282	28842	2705	
5000	9	10.060	8/12/2016 9:17:15 A	0.429%	9.413%	3.016%	26837	27927	29837	2709	
10000	10	10.300	8/12/2016 9:22:12 A	1.028%	11.441	-0.12%	26841	28870	31264	2686	
20000	11	10.690	8/12/2016 9:27:09 A	1.907%	8.724%	2.235%	26843	30904	32784	2705	
40000	12	10.550	8/12/2016 10:00:09 A	4.050%	12.511	2.049%	26909	35154	37844	2710	
ICV	13	10.230	8/12/2016 10:29:50 A	0.900%	21.098	2.360%	26941	28903	33346	2715	
ICB	14	76.220	8/12/2016 10:34:42 A	-0.01%	-0.07%	-0.36%	26885	26891	26810	2688	
HICV	15	51.100	8/12/2016 11:03:20 A	4.082%	3.658%	0.265%	26946	66320	70159	2707	
SRM1944	16	8.430	8/12/2016 11:09:18 A	4.159%	82.872	1.665%	26923	33666	48204	2705	
MB	17	86.790	8/12/2016 11:14:18 A	0.003%	-0.14%	-0.17%	26960	27034	26938	2696	
SRM1944	18	7.030	8/12/2016 11:19:12 A	4.628%	0.082%	1.583%	26933	33179	33121	2704	
MB	19	62.070	8/12/2016 11:24:00 A	0.006%	-0.12%	-0.37%	26950	27038	26953	2695	
162392601	20	12.470	8/12/2016 11:32:50 A	1.229%	-1.07%	0.608%	26984	29966	29868	2706	
162392601	21	10.680	8/12/2016 11:37:44 A	1.266%	0.013%	0.296%	26975	29581	29514	2702	
162392601D	22	15.980	8/12/2016 11:42:38 A	1.454%	0.024%	0.427%	26982	31446	31384	2705	
162392601D	23	12.680	8/12/2016 11:47:32 A	1.342%	-0.04%	0.399%	26992	30270	30199	2705	
162392601MS	24	16.420	8/12/2016 11:53:42 A	1.873%	16.843	0.678%	27029	32939	38652	2713	
162392601MS	25	13.740	8/12/2016 11:58:27 A	2.039%	21.127	0.580%	27021	32391	38391	2710	
CCV	26	10.090	8/12/2016 12:03:18 P	-0.014%	0.085%	-0.226%	27017	27011	26959	2702	

Run Details			Results				Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
CCB	27	55.020	8/12/2016 12:14:50 P	0.264%	-0.34%	0.067%	27040	29842	29733	2709
CCV	28	10.180	8/12/2016 12:19:52 P	0.908%	34.473	3.092%	27034	29061	36329	2730
CCB	29	61.700	8/12/2016 12:24:51 P	-0.03%	-0.26%	-0.10%	27059	27058	26954	2707
162392601MS	30	11.100	8/12/2016 12:31:07 P	2.633%	28.858	1.868%	27036	32735	39363	2722
162392601MS	31	16.780	8/12/2016 12:35:56 P	2.049%	22.641	0.723%	27043	33643	41517	2716
162392602	32	12.080	8/12/2016 12:40:47 P	1.097%	0.048%	0.178%	27041	29589	29531	2707
162392602	33	15.150	8/12/2016 12:45:38 P	1.148%	0.051%	0.284%	27038	30382	30328	2709
162392603	34	6.240	8/12/2016 12:50:30 P	3.466%	0.161%	1.844%	27047	31244	31195	2715
162392603	35	6.550	8/12/2016 12:55:23 P	3.219%	0.0%	1.795%	27054	31151	31081	2716
162392604	36	7.830	8/12/2016 1:00:15 PM	6.007%	0.318%	2.115%	27059	36075	36057	2721
162392604	37	8.520	8/12/2016 1:05:09 PM	5.912%	0.410%	1.899%	27069	36708	36711	2721
162392605	38	11.360	8/12/2016 1:10:02 PM	3.949%	0.299%	1.836%	27092	35733	35734	2727
162392605	39	11.700	8/12/2016 1:14:55 PM	3.900%	0.311%	1.956%	27097	35899	35905	2729
CCV	40	10.100	8/12/2016 1:19:47 PM	1.007%	50.168	1.840%	27108	29206	39731	2727
CCB	41	55.720	8/12/2016 1:24:40 PM	-0.05%	0.038%	-0.70%	27102	27053	27027	2709
162392606	42	12.680	8/12/2016 2:30:42 PM	3.354%	-0.04%	2.193%	27068	35326	35255	2730
162392606	43	12.880	8/12/2016 2:35:39 PM	3.176%	0.015%	1.394%	27051	34924	34858	2721
1162392607	44	5.500	8/12/2016 2:40:36 PM	4.859%	0.035%	1.862%	27040	32186	32120	2714
162392607	45	4.870	8/12/2016 2:45:33 PM	4.817%	-0.10%	1.739%	27043	31561	31490	2713
162392608	46	19.070	8/12/2016 2:50:27 PM	0.323%	-0.18%	0.239%	27049	28281	28204	2710
162392608	47	15.860	8/12/2016 2:55:20 PM	0.365%	-0.039%	0.136%	27061	28205	28122	2709
162392609	48	20.630	8/12/2016 3:00:13 PM	0.589%	-0.12%	0.441%	27062	29459	29384	2715
162392609	49	28.320	8/12/2016 3:05:05 PM	0.548%	-0.05%	0.420%	27071	30123	30050	2718
162392610	50	10.700	8/12/2016 3:09:58 PM	4.707%	0.049%	2.091%	27087	36774	36715	2728
162392610	51	12.770	8/12/2016 3:14:51 PM	4.987%	0.067%	2.287%	27099	39346	39294	2735
CCV	52	10.430	8/12/2016 3:56:56 PM	1.034%	44.197	1.370%	27097	29278	38847	2723
CCB	53	79.360	8/12/2016 4:01:48 PM	-0.001%	-0.15%	-0.38%	27044	27043	26948	2704

Reported on 8/15/2016 7:59 AM by Alpha Analytical

Run	Run Details			Results				Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
CCB	53	79.360	8/12/2016 4:01:48 PM	-0.01%	-0.15%	-0.38%	27044	27043	26948	2704	
162392611	54	9.430	8/12/2016 4:23:48 PM	0.465%	-1.142%	0.228%	27065	27945	27847	2710	
162392611	55	17.590	8/12/2016 4:28:44 PM	0.573%	-0.19%	0.287%	27040	29014	28937	2710	
CCV	56	10.010	8/12/2016 4:48:54 PM	1.038%	34.705	1.288%	27070	29165	36359	2719	
CCB	57	45.680	8/12/2016 4:53:47 PM	-0.004%	-0.16%	-0.061%	27035	27015	26930	2703	

# **Sample Raw Data**

DATE & TIME 8/12/2016 8:05:11 AM P\_ID 081216AR  
RUN TYPE K1 USER ID alpha  
WEIGHT (mg) 10.260 MODE CHN

SIGNALS				AVERAGE RESULTS	
ZR	26971	KC	15.068	KC	18.253
NR	28787	KH	1.368	KH	0.891
CR	30348	KN	1.499	KN	0.791
HR	30994	BLANKS	15 -60 21		
		K FACTORS	1.0% 5.03% 11.67%		
		FILL TIME	27 Seconds		

DATE & TIME 8/12/2016 8:10:06 AM P\_ID 081216AR  
RUN TYPE BLANK USER ID alpha  
MODE CHN

SIGNALS				AVERAGE RESULTS	
ZR	26889	CARBON	17	CARBON	18
NR	27322	HYDROGEN	18	HYDROGEN	-70
CR	27344	NITROGEN	21	NITROGEN	21
HR	27264	FILL TIME	27 Seconds		

DATE & TIME 8/12/2016 8:13:11 AM P\_ID 081216AR  
RUN TYPE K1 USER ID alpha  
WEIGHT (mg) 10.260 MODE CHN

SIGNALS				AVERAGE RESULTS	
ZR	26907	KC	15.760	KC	15.760
NR	27236	KH	1.453	KH	1.453
CR	28614	KN	0.791	KN	0.791
HR	29583	BLANKS	18 -70 21		
		K FACTORS	1.0% 5.03% 11.67%		
		FILL TIME	27 Seconds		

DATE & TIME 8/12/2016 8:44:53 AM P\_ID 081216AR  
RUN TYPE K1 USER ID alpha  
WEIGHT (mg) 10.320 MODE CHN

SIGNALS				AVERAGE RESULTS	
ZR	26876	KC	17.613	KC	17.613
NR	26971	KH	1.903	KH	1.903
CR	28998	KN	0.791	KN	0.791
HR	30150	BLANKS	18 -70 21		
		K FACTORS	1.0% 5.03% 11.67%		
		FILL TIME	28 Seconds		

NUMBER MESSAGE  
12 NITROGEN KFACTOR OUT OF TOLERANCE

DATE & TIME	8/12/2016 8:53:29 AM	P_ID	081216AR
RUN TYPE	K1	USER ID	alpha
WEIGHT (mg)	10.200	MODE	CHN

		SIGNALS		AVERAGE RESULTS	
		ZR	26868	KC	17.909
KC	18.206	NR	27135	KH	1.938
KH	1.974	CR	29010	KN	0.791
KN	0.207	HR	29953		
BLANKS	18	-70	21		
K FACTORS	1.0%	5.03%	11.67%		
FILL TIME	27 Seconds				

DATE & TIME	8/12/2016 8:58:24 AM	P_ID	081216AR
RUN TYPE	K1	USER ID	alpha
WEIGHT (mg)	10.140	MODE	CHN

		SIGNALS		AVERAGE RESULTS	
		ZR	26856	KC	18.806
KC	19.704	NR	26864	KH	2.091
KH	2.245	CR	28880	KN	0.791
KN	-0.11	HR	29955		
BLANKS	18	-70	21		
K FACTORS	1.0%	5.03%	11.67%		
FILL TIME	27 Seconds				

NUMBER	MESSAGE
8	CHECK FOR SAMPLE DROP

DATE & TIME	8/12/2016 9:07:24 AM	P_ID	081216AR
SAMPLE ID	1000	USER ID	alpha
WEIGHT (mg)	10.090	MODE	CHN

		SIGNALS			
		ZR	26858		
CARBON	0.111%	NR	27109		
HYDROGEN	7.726%	CR	27079		
NITROGEN	2.381%	HR	28589		
BLANKS	18	-70	21		
K FACTORS	18.806	2.091	0.791		
FILL	COMB	BOOST1	BOOST2		
	2	1	1		
FILL TIME	28 Seconds				

DATE & TIME	8/12/2016 9:12:20 AM	P_ID	081216AR
SAMPLE ID	1000	USER ID	alpha
WEIGHT (mg)	10.090	MODE	CHN

		SIGNALS			
		ZR	26842		
CARBON	0.111%	NR	27053		
HYDROGEN	7.726%	CR	27282		
NITROGEN	2.381%	HR	28842		
BLANKS	18	-70	21		
K FACTORS	18.806	2.091	0.791		

FILL 1 COMB 2 BOOST1 1 BOOST2 1  
 FILL TIME 27 Seconds

DATE & TIME 8/12/2016 9:17:15 AM P\_ID 081216AR  
 SAMPLE ID 5000 USER ID alpha  
 WEIGHT (mg) 10.060 MODE CHN

SIGNALS  
 ZR 26837  
 NR 27098  
 CR 27927  
 HR 29837  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL 1 COMB 2 BOOST1 1 BOOST2 1  
 FILL TIME 28 Seconds

DATE & TIME 8/12/2016 9:22:12 AM P\_ID 081216AR  
 SAMPLE ID 10000 USER ID alpha  
 WEIGHT (mg) 10.300 MODE CHN

SIGNALS  
 ZR 26841  
 NR 26861  
 CR 28870  
 HR 31264  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL 1 COMB 2 BOOST1 1 BOOST2 1  
 FILL TIME 29 Seconds

DATE & TIME 8/12/2016 9:27:05 AM P\_ID 081216AR  
 SAMPLE ID 20000 USER ID alpha  
 WEIGHT (mg) 10.000 MODE CHN

SIGNALS  
 ZR 26843  
 NR 27053  
 CR 30904  
 HR 32784  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL 1 COMB 2 BOOST1 1 BOOST2 1  
 FILL TIME 28 Seconds

DATE & TIME 8/12/2016 10:00:09 AM P\_ID 081216AR  
 SAMPLE ID 40000 USER ID alpha  
 WEIGHT (mg) 10.550 MODE CHN

SIGNALS  
 ZR 26909

CARBON	4.050%	NR	27101
HYDROGEN	12.511%	CR	35154
NITROGEN	2.049%	HR	37844
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	8/12/2016 10:29:50 AM	P_ID	081216AR
SAMPLE ID	ICV	USER ID	alpha
WEIGHT (mg)	10.230	MODE	CHN

SIGNALS

		ZR	26941
CARBON	0.900%	NR	27153
HYDROGEN	21.098%	CR	28903
NITROGEN	2.360%	HR	33346
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	30 Seconds		

DATE & TIME	8/12/2016 09:11:17 AM	P_ID	081216AR
SAMPLE ID	ICV	USER ID	alpha
WEIGHT (mg)	10.230	MODE	CHN

SIGNALS

		ZR	26885
CARBON	-0.001%	NR	26884
HYDROGEN	-0.007%	CR	26891
NITROGEN	-0.036%	HR	26810
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	8/12/2016 11:03:20 AM	P_ID	081216AR
SAMPLE ID	HICV	USER ID	alpha
WEIGHT (mg)	51.100	MODE	CHN

SIGNALS

		ZR	26946
CARBON	4.082%	NR	27074
HYDROGEN	3.658%	CR	66320
NITROGEN	0.265%	HR	70159
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	40 Seconds		



DATE & TIME	8/12/2016 11:09:18 AM	P_ID	081216AR
SAMPLE ID	SRM1944	USER ID	alpha
WEIGHT (mg)	8.430	MODE	CHN

SIGNALS			
	ZR	26923	
CARBON	4.159%	NR	27055
HYDROGEN	82.872%	CR	33666
NITROGEN	1.665%	HR	48204
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	8/12/2016 11:14:18 AM	P_ID	081216AR
SAMPLE ID	MB	USER ID	alpha
WEIGHT (mg)	86.790	MODE	CHN

SIGNALS			
	ZR	26960	
CARBON	0.003%	NR	26969
HYDROGEN	-0.14%	CR	27034
NITROGEN		HR	26938
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	32 Seconds		

DATE & TIME	8/12/2016 11:19:17 AM	P_ID	081216AR
SAMPLE ID	SRM1944	USER ID	alpha
WEIGHT (mg)	7.755	MODE	CHN

SIGNALS			
	ZR	26933	
CARBON	4.628%	NR	27042
HYDROGEN	0.082%	CR	33179
NITROGEN	1.583%	HR	33121
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/12/2016 11:24:00 AM	P_ID	081216AR
SAMPLE ID	MB	USER ID	alpha
WEIGHT (mg)	62.070	MODE	CHN

SIGNALS			
	ZR	26950	
CARBON	0.006%	NR	26953
HYDROGEN	-0.12%	CR	27038
NITROGEN	-0.37%	HR	26953
BLANKS	18	-70	21

K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/12/2016 11:32:50 AM P\_ID 081216AR  
 SAMPLE ID 162392601 USER ID alpha  
 WEIGHT (mg) 12.470 MODE CHN

SIGNALS  
 ZR 26984  
 NR 27065  
 CR 29966  
 HR 29868

CARBON 1.229%  
 HYDROGEN -1.107%  
 NITROGEN 0.608%  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 38 Seconds

DATE & TIME 8/12/2016 11:37:44 AM P\_ID 081216AR  
 SAMPLE ID 162392601 USER ID alpha  
 WEIGHT (mg) 10.680 MODE CHN

SIGNALS  
 ZR 26975  
 NR 27021  
 CR 29581  
 HR 29514

CARBON 1.266%  
 HYDROGEN 0.013%  
 NITROGEN 0.296%  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/12/2016 11:42:38 AM P\_ID 081216AR  
 SAMPLE ID 162392601D USER ID alpha  
 WEIGHT (mg) 15.980 MODE CHN

SIGNALS  
 ZR 26982  
 NR 27057  
 CR 31446  
 HR 31384

CARBON 1.454%  
 HYDROGEN 0.024%  
 NITROGEN 0.427%  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/12/2016 11:47:32 AM P\_ID 081216AR  
 SAMPLE ID 162392601D USER ID alpha  
 WEIGHT (mg) 12.680 MODE CHN

				SIGNALS
				ZR 26992
CARBON	1.342%			NR 27053
HYDROGEN	-0.04%			CR 30270
NITROGEN	0.399%			HR 30199
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	29 Seconds			

DATE & TIME	8/12/2016 11:53:42 AM	P_ID	081216AR
SAMPLE ID	162392601MS	USER ID	alpha
WEIGHT (mg)	16.420	MODE	CHN

				SIGNALS
				ZR 27029
CARBON	1.873%			NR 27138
HYDROGEN	16.843%			CR 32939
NITROGEN	0.678%			HR 38652
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	29 Seconds			

DATE & TIME	8/12/2016 11:56:27 AM	P_ID	081216AR
SAMPLE ID	162392601MS	USER ID	alpha
WEIGHT (mg)	16.420	MODE	CHN

				SIGNALS
				ZR 27021
CARBON	2.039%			NR 27105
HYDROGEN	21.127%			CR 32391
NITROGEN	0.580%			HR 38391
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	29 Seconds			

DATE & TIME	8/12/2016 12:03:18 PM	P_ID	081216AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.090	MODE	CHN

				SIGNALS
				ZR 27017
CARBON	.014%			NR 27020
HYDROGEN	0.085%			CR 27011
NITROGEN	-2.26%			HR 26959
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	29 Seconds			

DATE & TIME	8/12/2016 12:14:50 PM	P_ID	081216AR
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	55.020	MODE	CHN

SIGNALS			
	ZR	27040	
CARBON	0.264%	NR	27090
HYDROGEN	-0.34%	CR	29842
NITROGEN	0.067%	HR	29733
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	38 Seconds		

DATE & TIME	8/12/2016 12:19:52 PM	P_ID	081216AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.180	MODE	CHN

SIGNALS			
	ZR	27034	
CARBON	0.908%	NR	27304
HYDROGEN	34.473%	CR	29061
NITROGEN	3.092%	HR	36329
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	37 Seconds		

DATE & TIME	8/12/2016 12:24:51 PM	P_ID	081216AR
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	51.700	MODE	CHN

SIGNALS			
	ZR	27059	
CARBON	-0.03%	NR	27075
HYDROGEN	-0.26%	CR	27058
NITROGEN	-0.10%	HR	26954
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	34 Seconds		

DATE & TIME	8/12/2016 12:31:07 PM	P_ID	081216AR
SAMPLE ID	162392601MSD	USER ID	alpha
WEIGHT (mg)	11.100	MODE	CHN

SIGNALS			
	ZR	27036	
CARBON	2.633%	NR	27221
HYDROGEN	28.858%	CR	32735
NITROGEN	1.868%	HR	39363

BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/12/2016 12:35:56 PM	P_ID	081216AR
SAMPLE ID	162392601MSD	USER ID	alpha
WEIGHT (mg)	16.780	MODE	CHN

SIGNALS

ZR	27043
NR	27160
CR	33643
HR	41517

CARBON	2.049%
HYDROGEN	22.641%
NITROGEN	0.723%
BLANKS	18 -70 21
K FACTORS	18.806 2.091 0.791
FILL	COMB BOOST1 BOOST2
	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/12/2016 12:41:07 PM	P_ID	081216AR
SAMPLE ID	162392602	USER ID	alpha
WEIGHT (mg)	17.090	MODE	CHN

SIGNALS

ZR	27041
NR	27079
CR	29589
HR	29531

CARBON	1.097%
HYDROGEN	0.048%
NITROGEN	0.178%
BLANKS	18 -70 21
K FACTORS	18.806 2.091 0.791
FILL	COMB BOOST1 BOOST2
	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/12/2016 12:45:38 PM	P_ID	081216AR
SAMPLE ID	162392602	USER ID	alpha
WEIGHT (mg)	15.150	MODE	CHN

SIGNALS

ZR	27038
NR	27093
CR	30382
HR	30328

CARBON	1.148%
HYDROGEN	0.051%
NITROGEN	0.284%
BLANKS	18 -70 21
K FACTORS	18.806 2.091 0.791
FILL	COMB BOOST1 BOOST2
	2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/12/2016 12:50:30 PM	P_ID	081216AR
SAMPLE ID	162392603	USER ID	alpha
WEIGHT (mg)	6.240	MODE	CHN

SIGNALS			
	ZR	27047	
CARBON	NR	27159	
HYDROGEN	CR	31244	
NITROGEN	HR	31195	
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/12/2016 12:55:23 PM	P_ID	081216AR
SAMPLE ID	162392603	USER ID	alpha
WEIGHT (mg)	6.550	MODE	CHN

SIGNALS			
	ZR	27054	
CARBON	NR	27168	
HYDROGEN	CR	31151	
NITROGEN	HR	31081	
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/12/2016 1:00:15 PM	P_ID	081216AR
SAMPLE ID	162392604	USER ID	alpha
WEIGHT (mg)	6.550	MODE	CHN

SIGNALS			
	ZR	27059	
CARBON	NR	27211	
HYDROGEN	CR	36075	
NITROGEN	HR	36057	
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/12/2016 1:05:09 PM	P_ID	081216AR
SAMPLE ID	162392604	USER ID	alpha
WEIGHT (mg)	8.520	MODE	CHN

SIGNALS			
	ZR	27069	
CARBON	NR	27218	
HYDROGEN	CR	36708	
NITROGEN	HR	36711	
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	8/12/2016 1:10:02 PM	P_ID	081216AR
SAMPLE ID	162392605	USER ID	alpha
WEIGHT (mg)	11.360	MODE	CHN

SIGNALS

	ZR	27092
CARBON	NR	27278
3.949%	CR	35733
HYDROGEN	HR	35734
0.299%		
NITROGEN		
1.836%		
BLANKS	18	-70 21
K FACTORS	18.806	2.091 0.791
FILL	COMB	BOOST1 BOOST2
	2	1
FILL TIME	29 Seconds	

DATE & TIME	8/12/2016 1:14:55 PM	P_ID	081216AR
SAMPLE ID	162392605	USER ID	alpha
WEIGHT (mg)	11.700	MODE	CHN

SIGNALS

	ZR	27097
CARBON	NR	27299
3.900%	CR	35899
HYDROGEN	HR	35905
0.311%		
NITROGEN		
1.956%		
BLANKS	18	-70 21
K FACTORS	18.806	2.091 0.791
FILL	COMB	BOOST1 BOOST2
	2	1
FILL TIME	29 Seconds	

DATE & TIME	8/12/2016 1:20:47 PM	P_ID	081216AR
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	11.100	MODE	CHN

SIGNALS

	ZR	27108
CARBON	NR	27276
1.007%	CR	29206
HYDROGEN	HR	39731
50.168%		
NITROGEN		
1.840%		
BLANKS	18	-70 21
K FACTORS	18.806	2.091 0.791
FILL	COMB	BOOST1 BOOST2
	2	1
FILL TIME	29 Seconds	

DATE & TIME	8/12/2016 1:24:40 PM	P_ID	081216AR
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	55.720	MODE	CHN

SIGNALS

	ZR	27102
CARBON	NR	27092
1.005%	CR	27053
HYDROGEN	HR	27027
0.038%		
NITROGEN		
-0.070%		

BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	1	2	1
FILL TIME	29 Seconds		

DATE & TIME	8/12/2016 2:30:42 PM	P_ID	081216AR
SAMPLE ID	162392606	USER ID	alpha
WEIGHT (mg)	12.680	MODE	CHN

SIGNALS

ZR	27068
NR	27309
CR	35326
HR	35255

CARBON	3.354%
HYDROGEN	-.004%
NITROGEN	2.193%
BLANKS	18 -70 21
K FACTORS	18.806 2.091 0.791
FILL	COMB BOOST1 BOOST2
	1 2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/12/2016 2:35:39 PM	P_ID	081216AR
SAMPLE ID	162392606	USER ID	alpha
WEIGHT (mg)	12.880	MODE	CHN

SIGNALS

ZR	27051
NR	27214
CR	34924
HR	34858

CARBON	3.176%
HYDROGEN	0.015%
NITROGEN	1.394%
BLANKS	18 -70 21
K FACTORS	18.806 2.091 0.791
FILL	COMB BOOST1 BOOST2
	1 2 1 1
FILL TIME	29 Seconds

DATE & TIME	8/12/2016 2:40:36 PM	P_ID	081216AR
SAMPLE ID	1162392607	USER ID	alpha
WEIGHT (mg)	5.500	MODE	CHN

SIGNALS

ZR	27040
NR	27142
CR	32186
HR	32120

CARBON	4.859%
HYDROGEN	0.035%
NITROGEN	1.862%
BLANKS	18 -70 21
K FACTORS	18.806 2.091 0.791
FILL	COMB BOOST1 BOOST2
	1 2 1 1
FILL TIME	30 Seconds

DATE & TIME	8/12/2016 2:45:33 PM	P_ID	081216AR
SAMPLE ID	162392607	USER ID	alpha
WEIGHT (mg)	4.870	MODE	CHN



				SIGNALS
				ZR 27043
CARBON	4.817%			NR 27131
HYDROGEN	-010%			CR 31561
NITROGEN	1.739%			HR 31490
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	30 Seconds			

DATE & TIME	8/12/2016 2:50:27 PM	P_ID	081216AR
SAMPLE ID	162392608	USER ID	alpha
WEIGHT (mg)	19.070	MODE	CHN

				SIGNALS
				ZR 27049
CARBON	0.323%			NR 27106
HYDROGEN	-018%			CR 28281
NITROGEN	0.239%			HR 28204
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	30 Seconds			

DATE & TIME	8/12/2016 2:55:20 PM	P_ID	081216AR
SAMPLE ID	162392608	USER ID	alpha
WEIGHT (mg)	15.860	MODE	CHN

				SIGNALS
				ZR 27061
CARBON	0.365%			NR 27099
HYDROGEN	-039%			CR 28205
NITROGEN	0.136%			HR 28122
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	30 Seconds			

DATE & TIME	8/12/2016 3:00:13 PM	P_ID	081216AR
SAMPLE ID	162392609	USER ID	alpha
WEIGHT (mg)	20.630	MODE	CHN

				SIGNALS
				ZR 27062
CARBON	0.589%			NR 27155
HYDROGEN	-012%			CR 29459
NITROGEN	0.441%			HR 29384
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	30 Seconds			

DATE & TIME	8/12/2016 3:05:05 PM	P_ID	081216AR
SAMPLE ID	162392609	USER ID	alpha
WEIGHT (mg)	28.320	MODE	CHN

SIGNALS

	ZR	27071	
CARBON	NR	27186	
HYDROGEN	CR	30123	
NITROGEN	HR	30050	
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	30 Seconds		

DATE & TIME	8/12/2016 3:09:58 PM	P_ID	081216AR
SAMPLE ID	162392610	USER ID	alpha
WEIGHT (mg)	10.700	MODE	CHN

SIGNALS

	ZR	27087	
CARBON	NR	27285	
HYDROGEN	CR	36774	
NITROGEN	HR	36715	
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	30 Seconds		

DATE & TIME	8/12/2016 3:14:51 PM	P_ID	081216AR
SAMPLE ID	162392611	USER ID	alpha
WEIGHT (mg)	10.770	MODE	CHN

SIGNALS

	ZR	27099	
CARBON	NR	27351	
HYDROGEN	CR	39346	
NITROGEN	HR	39294	
BLANKS	18	-70	21
K FACTORS	18.806	2.091	0.791
FILL	COMB	BOOST1	BOOST2
	2	1	1
FILL TIME	30 Seconds		

DATE & TIME	8/12/2016 3:56:56 PM	P_ID	081216AR
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.430	MODE	CHN

SIGNALS

	ZR	27097
CARBON	NR	27231
HYDROGEN	CR	29278
NITROGEN	HR	38847

BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/12/2016 4:01:48 PM P\_ID 081216AR  
 SAMPLE ID CCB USER ID alpha  
 WEIGHT (mg) 79.360 MODE CHN

SIGNALS

ZR 27044  
 NR 27041  
 CR 27043  
 HR 26948  
 CARBON -001%  
 HYDROGEN -015%  
 NITROGEN -038%  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 2 1 1  
 FILL TIME 30 Seconds

DATE & TIME 8/12/2016 4:23:46 PM P\_ID 081216AR  
 SAMPLE ID 162392611 USER ID alpha  
 WEIGHT (mg) 17.491 MODE CHN

SIGNALS

ZR 27065  
 NR 27103  
 CR 27945  
 HR 27847  
 CARBON 0.465%  
 HYDROGEN -1.42%  
 NITROGEN 0.228%  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/12/2016 4:28:44 PM P\_ID 081216AR  
 SAMPLE ID 162392611 USER ID alpha  
 WEIGHT (mg) 17.590 MODE CHN

SIGNALS

ZR 27040  
 NR 27101  
 CR 29014  
 HR 28937  
 CARBON 0.573%  
 HYDROGEN -019%  
 NITROGEN 0.287%  
 BLANKS 18 -70 21  
 K FACTORS 18.806 2.091 0.791  
 FILL COMB BOOST1 BOOST2  
 2 1 1  
 FILL TIME 29 Seconds

DATE & TIME 8/12/2016 4:48:54 PM P\_ID 081216AR  
 SAMPLE ID CCV USER ID alpha  
 WEIGHT (mg) 10.010 MODE CHN

				SIGNALS
				ZR 27070
CARBON	1.038%			NR 27193
HYDROGEN	34.705%			CR 29165
NITROGEN	1.288%			HR 36359
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	29 Seconds			

DATE & TIME	8/12/2016 4:53:47 PM	P_ID	081216AR
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	45.680	MODE	CHN

				SIGNALS
				ZR 27035
CARBON	-004%			NR 27034
HYDROGEN	-016%			CR 27015
NITROGEN	-061%			HR 26930
BLANKS	18	-70	21	
K FACTORS	18.806	2.091	0.791	
FILL	COMB	BOOST1	BOOST2	
	2	1	1	
FILL TIME	29 Seconds			

# **Work Group**

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Aug 15 2016, 11:24 am

Work Group: WG922742 for Department: 7 Wet Chemistry

Created: 15-AUG-16 Due: Operator: AR

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1623926-01	BO-04_072516_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0823	S0	Glass-A.06
L1623926-02	BO-04_072516_SED_03-	S A2-TOC-LK-2REPS	SOIL	DONE	U	0808	0823	S0	Glass-A.06
L1623926-03	ES-04_072816_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
L1623926-04	ES-01-01_072816_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
L1623926-05	ES-01-03_072816_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
L1623926-06	ES-01-04_072816_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
L1623926-07	ES-03_072816_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
L1623926-08	ES-FP_072816_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
L1623926-09	ES-FP_072816_SED_03-	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
L1623926-10	MMPOLY_072916_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0812	0823	S0	Glass-A.06
L1623926-11	L9-45_072816_SED_03	S A2-TOC-LK-2REPS	SOIL	DONE	U	0811	0823	S0	Glass-A.06
WG922742-1	Laboratory Method Bl	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG922742-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG922742-3	Duplicate Sample	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG922742-4	Matrix Spike	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG922742-5	Matrix Spike Duplica	S A2-TOC-LK-2REPS	SOIL	DONE	U				

Comments:

WG922742-3 L1623926-01  
 WG922742-4 L1623926-01  
 WG922742-5 L1623926-01

# Sample Preparation



TOC Instrument: #1 - SN: 241N8102003  
 (Circle one) #2 SN: 241N9041221  
 #3 - SN: 241L1308211  
 CCVD: NW051116A → K  
 SRM 1944 ID: WS081819A  
 Filter Aid ID: WS1201USA

Date: 8/12/10  
 Analyst: AR/clar  
 2° Review:

ICV ID: NW051116A  
 Balance ID: 001712  
 Other SRM ID:

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std K				01	10.26
Blank				02	74.98
K Factor				03	10.25
Blank - K				04	10.32
K Factor				05	10.20
K Factor				06	10.14
ICV - 0				07	10.11
ICB 1000				08	10.09
ICB 5000				09	10.06
Blank 10000				10	10.30
20000				11	10.69
40000				12	10.55
ICV				13	10.23
ICB				14	76.22
HICV				15	51.10
SRM1944				16	8.43
MB				17	86.79
SRM1944				18	7.03
CCV - MB				19	62.67
CCB11623926	01			20	12.47
↓	01			21	10.68
↓	01D			22	15.98

\* Autosampler error ok

Document Type: Form

Pre-Qualtrax Document ID: 107-02





# Alpha Report





## ANALYTICAL REPORT

Lab Number:	L1623926
Client:	AMEC Foster Wheeler E & I, Inc. 511 Congress Street P.O. Box 7050 Portland, ME 04112-7050
ATTN:	Rod Pendleton
Phone:	(207) 828-3692
Project Name:	PENOBSCOT RIVER ESTUARY
Project Number:	3616166052
Report Date:	08/16/16

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1623926-01	BO-04_072516_SED_03	SEDIMENT	Not Specified	07/25/16 11:30	08/02/16
L1623926-02	BO-04_072516_SED_03-DUP	SEDIMENT	Not Specified	07/25/16 11:30	08/02/16
L1623926-03	ES-04_072816_SED_03	SEDIMENT	Not Specified	07/28/16 10:30	08/02/16
L1623926-04	ES-01-01_072816_SED_03	SEDIMENT	Not Specified	07/28/16 11:40	08/02/16
L1623926-05	ES-01-03_072816_SED_03	SEDIMENT	Not Specified	07/28/16 15:10	08/02/16
L1623926-06	ES-01-04_072816_SED_03	SEDIMENT	Not Specified	07/28/16 15:50	08/02/16
L1623926-07	ES-03_072816_SED_03	SEDIMENT	Not Specified	07/28/16 11:20	08/02/16
L1623926-08	ES-FP_072816_SED_03	SEDIMENT	Not Specified	07/28/16 14:30	08/02/16
L1623926-09	ES-FP_072816_SED_03-DUP	SEDIMENT	Not Specified	07/28/16 14:30	08/02/16
L1623926-10	MMPOLY_072916_SED_03	SEDIMENT	Not Specified	07/29/16 14:30	08/02/16
L1623926-11	L9-45_072816_SED_03	SEDIMENT	Not Specified	07/28/16 09:30	08/02/16

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt


All samples were frozen and kept in frozen storage to extend the holding time.

#### Total Organic Carbon

The WG922742-5 MSD recovery, performed on L1623926-01, is outside the acceptance criteria (Rep1 - 151%); however, the associated LCS/SRM recovery is within overall method allowances. In addition, the WG922742-4/-5 MS/MSD RPD for (Rep1 - 34%) is above the acceptance criteria. No further action was required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 08/16/16

# **INORGANICS & MISCELLANEOUS**

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-01  
**Client ID:** BO-04\_072516\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/25/16 11:30  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	1.24		%	0.050	0.050	1	-	08/12/16 11:37	13,-	AR
Total Organic Carbon (Rep2)	1.28		%	0.050	0.050	1	-	08/12/16 11:37	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	76.7		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP





Project Name: PENOBSCOT RIVER ESTUARY

Lab Number: L1623926

Project Number: 3616166052

Report Date: 08/16/16

## SAMPLE RESULTS

Lab ID: L1623926-02  
 Client ID: BO-04\_072516\_SED\_03-DUP  
 Sample Location: Not Specified  
 Matrix: Sediment

Date Collected: 07/25/16 11:30  
 Date Received: 08/02/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	1.11		%	0.050	0.050	1	-	08/12/16 12:45	13,-	AR
Total Organic Carbon (Rep2)	1.16		%	0.050	0.050	1	-	08/12/16 12:45	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	75.3		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-03  
**Client ID:** ES-04\_072816\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 10:30  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	3.48		%	0.050	0.050	1	-	08/12/16 12:55	13,-	AR
Total Organic Carbon (Rep2)	3.23		%	0.050	0.050	1	-	08/12/16 12:55	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	31.0		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-04  
**Client ID:** ES-01-01\_072816\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 11:40  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	5.98		%	0.050	0.050	1	-	08/12/16 13:05	13,-	AR
Total Organic Carbon (Rep2)	5.88		%	0.050	0.050	1	-	08/12/16 13:05	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	31.7		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-05  
**Client ID:** ES-01-03\_072816\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 15:10  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	3.93		%	0.050	0.050	1	-	08/12/16 13:14	13,-	AR
Total Organic Carbon (Rep2)	3.88		%	0.050	0.050	1	-	08/12/16 13:14	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	33.9		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-06  
**Client ID:** ES-01-04\_072816\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 15:50  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	3.34		%	0.050	0.050	1	-	08/12/16 14:35	13,-	AR
Total Organic Carbon (Rep2)	3.16		%	0.050	0.050	1	-	08/12/16 14:35	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	45.0		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-07  
**Client ID:** ES-03\_072816\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 11:20  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	4.86		%	0.050	0.050	1	-	08/12/16 14:45	13,-	AR
Total Organic Carbon (Rep2)	4.83		%	0.050	0.050	1	-	08/12/16 14:45	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	38.2		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-08  
**Client ID:** ES-FP\_072816\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 14:30  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	0.336		%	0.050	0.050	1	-	08/12/16 14:55	13,-	AR
Total Organic Carbon (Rep2)	0.381		%	0.050	0.050	1	-	08/12/16 14:55	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	79.6		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-09  
**Client ID:** ES-FP\_072816\_SED\_03-DUP  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 14:30  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	0.598		%	0.050	0.050	1	-	08/12/16 15:05	13,-	AR
Total Organic Carbon (Rep2)	0.553		%	0.050	0.050	1	-	08/12/16 15:05	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	83.4		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP





**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-10  
**Client ID:** MMPOLY\_072916\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/29/16 14:30  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	4.68		%	0.050	0.050	1	-	08/12/16 15:14	13,-	AR
Total Organic Carbon (Rep2)	4.96		%	0.050	0.050	1	-	08/12/16 15:14	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	39.2		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

**SAMPLE RESULTS**

**Lab ID:** L1623926-11  
**Client ID:** L9-45\_072816\_SED\_03  
**Sample Location:** Not Specified  
**Matrix:** Sediment

**Date Collected:** 07/28/16 09:30  
**Date Received:** 08/02/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	0.493		%	0.050	0.050	1	-	08/12/16 16:28	13,-	AR
Total Organic Carbon (Rep2)	0.585		%	0.050	0.050	1	-	08/12/16 16:28	13,-	AR
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	65.3		%	0.100	0.100	1	-	08/03/16 11:54	121,2540G	SP



Project Name: PENOBSCOT RIVER ESTUARY

Lab Number: L1623926

Project Number: 3616166052

Report Date: 08/16/16

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-11 Batch: WG922742-1									
Total Organic Carbon (Rep1)	ND	%	0.050	0.050	1	-	08/12/16 11:24	13,-	AR
Total Organic Carbon (Rep2)	ND	%	0.050	0.050	1	-	08/12/16 11:24	13,-	AR

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG922742-4 WG922742-5 QC Sample: L1623926-01 Client ID: BO-04_072516_SED_03												
Total Organic Carbon (Rep1)	1.24	0.621	1.87	101		2.63	151	Q	75-125	34	Q	25
Total Organic Carbon (Rep2)	1.28	0.686	2.04	111		2.04	124		75-125	0		25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PENOBSCOT RIVER ESTUARY

Project Number: 3616166052

Lab Number: L1623926

Report Date: 08/16/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG919609-1 QC Sample: L1623926-01 Client ID: BO-04_072516_SED_03						
Solids, Total	76.7	77.3	%	1		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG922742-3 QC Sample: L1623926-01 Client ID: BO-04_072516_SED_03						
Total Organic Carbon (Rep1)	1.24	1.46	%	16		25
Total Organic Carbon (Rep2)	1.28	1.35	%	5		25

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

### S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG922742-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	94		75-125
Total Organic Carbon (Rep2)	105		75-125

**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1623926-01A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-01B	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-01C	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-02A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-03A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-04A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-05A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-06A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-07A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-08A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-09A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-10A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1623926-11A	Glass 60mL/2oz unpreserved	A	N/A	4.4	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)

\*Values in parentheses indicate holding time in days



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

**Report Format:** DU Report with 'J' Qualifiers





**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** PENOBSCOT RIVER ESTUARY  
**Project Number:** 3616166052

**Lab Number:** L1623926  
**Report Date:** 08/16/16

## REFERENCES

- 13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

**EPA 624:** m/p-xylene, o-xylene

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L1623926

## Chain Of Custody/Analysis Request Form

### USDC - Penobscot River

### Lab: Alpha

AMEC, Suite 200, 511 Congress Street, Portland, ME

Tech Lead - Louise Venne  
Work# 770-421-3461

Proj Chemist - Denise King  
508-789-1738

AMEC Job Number = 3616166052

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media	Method	Fraction
23926 .01	1590	7/25/2016	11:30	BO-04_072516_SED_03	1						
				FS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.02	1591	7/25/2016	11:30	BO-04_072516_SED_03_DUP	1						
				FD	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.01	1592	7/25/2016	11:30	BO-04_072516_SED_03_MS	1						
				MS	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.01	1593	7/25/2016	11:30	BO-04_072516_SED_03_MD	1						
				MSD	1	2 oz	Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

QC Codes: FS = Field Sample, EB = Equipment Rinsate Blank, MS - Matrix Spike, MSD = Matrix Spike Duplicate

Relinquished: [Signature] Date: 08/01/2016 Time: 14:00

Received: [Signature] Date: 8/2/16 Time: 10:30

Relinq PK 8/2/16 14:30  
 Rec'd Kam [Signature] 8/2/16 14:30  
 \* - QC sample

Monday, August 01, 2016

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L1623926

## Chain Of Custody/Analysis Request Form

### USDC - Penobscot River

AMEC, Suite 200, 511 Congress  
Street, Portland, ME

Tech Lead - Louise Venne  
Work# 770-421-3461

### Lab: Alpha

Proj Chemist - Denise King  
508-789-1738

AMEC Job Number = 3616166052

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media	Method	Fraction
2392603	1542	7/28/2016	10:30	ES-04_072816_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.04	1545	7/28/2016	11:40	E-01-01_072816_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.05	1546	7/28/2016	15:10	E-01-03_072816_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.06	1547	7/28/2016	15:50	E-01-04_072816_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.07	1576	7/28/2016	11:20	ES-03_072816_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.08	1578	7/28/2016	14:30	ES-FP_072816_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.09	1579	7/28/2016	14:30	ES-FP_072816_SED_03_DUP	1						
				FD	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T
.10	1582	7/29/2016	14:30	MMPOLY_072916_SED_03	1						
				FS	1	2	oz Amber Glass	4 deg C	SED	TOC (Lloyd-Kahn)	T

Monday, August 01, 2016

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L1623926

23926.11

Samp #	Sample Date	Sample Time	Field Sample ID	QC Code	Qty Total	Qty Each	Bottle Size and Material	Preservative	Media Method	Fraction
1584	7/28/2016	9:30	L9-45_072816_SED_03	FS	1	2	oz Amber Glass	4 deg C	SED TOC (Lloyd-Kahn)	T

QC Codes: FS = Field Sample, EB = Equipment Rinsate Blank, MS - Matrix Spike, MSD = Matrix Spike Duplicate

Relinquished: Matthew Moran Date: 08 / 01 / 2016 Time: 0900

Received: [Signature] Date: 8 / 2 / 16 Time: 10:32

Relinquish: f.k. 8/2/16 14:30 Rec'd Kim Bailey 8/2/16 1430



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

19 December 2016

Denise King  
AMEC Foster Wheeler  
511 Congress Street  
Portland, ME 04101

RE: Penobscot Sediments Hg and Methyl Hg 2016

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Amy Goodall".

Amy Goodall  
Project Manager



AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W-61-HIGH_110816_SED_03	1611323-01	Soil/Sediment	08-Nov-16 14:30	10-Nov-16 09:50
W-61-INT_110816_SED_03	1611323-02	Soil/Sediment	08-Nov-16 13:30	10-Nov-16 09:50
W-61-LOW_110816_SED_03	1611323-03	Soil/Sediment	08-Nov-16 14:00	10-Nov-16 09:50
W-61-MID_110816_SED_03	1611323-04	Soil/Sediment	08-Nov-16 14:15	10-Nov-16 09:50
W-63-HIGH_110816_SED_03	1611323-05	Soil/Sediment	08-Nov-16 16:10	10-Nov-16 09:50
W-63-INT_110816_SED_03	1611323-06	Soil/Sediment	08-Nov-16 16:40	10-Nov-16 09:50
W-63-LOW_110816_SED_03	1611323-07	Soil/Sediment	08-Nov-16 16:30	10-Nov-16 09:50
W-63-MID_110816_SED_03	1611323-08	Soil/Sediment	08-Nov-16 16:20	10-Nov-16 09:50

Eurofins Frontier Global Sciences, Inc.

*The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amy Goodall, Project Manager





AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 11/10/2016 9:50:00 AM. The samples were received intact, on-ice within a sealed cooler at 1.9 degrees Celsius.

SAMPLE PREPARATION AND ANALYSIS

Total solids analysis was performed in accordance with method SM2540B. Total solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction which may be outside of the method recommended holding time of 7 days from sample collection.

Total mercury preparation and analysis was performed by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631B.

Samples were prepared and analyzed for methyl mercury by cold vapor gas chromatography atomic fluorescence spectrometry (CV-GC-AFS) in accordance with EPA 1630 (EFGS-070).

ANALYTICAL AND QUALITY CONTROL ISSUES

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

Eurofins Frontier Global Sciences, Inc.

*The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amy Goodall, Project Manager



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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Eurofins Frontier Global Sciences, Inc.

*The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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Amy Goodall, Project Manager

# Sample Receipt Checklist

EFGS Work Order: 1611323

Client: AMEC Foster Wheeler

Date & Time Received: 11/10/16 9:50

Date Labeled: 11/10/16 Labeled By: CSF

Project: \_\_\_\_\_

Received By: LM

Label Verified By: LM

# of Coolers Received: 1 Samples Arrived By:  Shipping Service \_\_\_\_\_ Courier \_\_\_\_\_ Hand \_\_\_\_\_ Other (Specify: \_\_\_\_\_)

Coolant:  None/Ambient  Loose Ice  Gel Ice  Dry Ice Coolant Required:  Y  N Temp Blank Used:  Y  N for Cooler(s): \_\_\_\_\_

Notify Project Manager if packages/coolers are received without coolant or with thawed coolant and at a temperature in excess of 6°C. PM notified: Y/N

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	Y	
Custody Seals are present and intact:	Y	
Custody seals signed:	Y	

TID:	CF:	Date/time:	By:
<u>5225</u>	<u>-0.7 °C</u>	<u>11/10/16 9:50</u>	<u>LM</u>
Cooler 1: <u>2.6 °C</u>	w/ CF: <u>1.9 °C</u>	Cooler 4: °C	w/ CF: °C
Cooler 2: °C	w/ CF: °C	Cooler 5: °C	w/ CF: °C
Cooler 3: °C	w/ CF: °C	Cooler 6: °C	w/ CF: °C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	Y	
Date and time of collection:	Y	
Sampled by:	Y	
Preservation type:	NA	
Requested analyses:	Y	
Required signatures:	Y	
Internal COC required:	N	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	Y	
Sample labels are present and legible:	Y	
Sample ID on container/bag matches COC:	Y	
Correct sample containers used:	Y	
Samples received within holding times:	Y	
Sample volume sufficient for requested analyses:	Y	
Correct preservative used for requested analyses:	Y	

Anomalies/Non-conformances (attach additional pages if needed):

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1611323

Chain of Custody Record & Laboratory Analysis Request:  
Air, Water, Sediments, Plant and Animal Tissue,  
Hydrocarbon & Other Samples

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
Phone: 425-686-1996  
Fax: 425-686-3096  
info@frontiergs.com  
http://www.frontiergs.com



Frontier Global Sciences

Page 1 of 1

Client: AMEC FOSTER WHEELER		Contact: DENISE KING						Analyses Requested		EFGS PM:		
Address: 511 CONGRESS ST. SUITE 200 PORTLAND, ME 04101		Phone: 508-789-1750 Fax:								Date:		
Project Name: USIX PENNSYLVANIA		E-mail: DENISE.KING@AMECFW.COM								TAT (business days): 20 (std) 15 10 5 4 3 2 24 hrs. (For TAT < 10 days, contact PM. Surcharges apply for expedited TAT)		
Report To: DENISE KING		Contract/PO:								Saturday delivery? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, please contact PM)		
Address: 2 MILK RD. CHELMSFORD, MA 01824		Invoice To: ROD PENDLETON - AMEC FW								EDD <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
Phone: Fax: 978-692-6633		Address: 511 CONGRESS ST. SUITE 200 PORTLAND, ME 04101								QA <input checked="" type="checkbox"/> Standard <input type="checkbox"/> High		
E-mail:		Phone: 207-541-5401 Fax:								Comments		
E-mail: ROD.PENDLETON@AMECFW.COM		E-mail: ROD.PENDLETON@AMECFW.COM										
No.	Engraved Bottle ID	Sample ID	# of Bottles	Matrix	Date & Time	Sampled By	Field Filtered (Y/N)	Field Preserved: HNO <sub>3</sub> HCl BrCl Other (%)	Hg-1631e	MeHg-1630	802 AG, Frozen	
1		W-61-HIGH-110816-SED-03		SS	11/09/16 1430	KAB/BA	N	N	1	1		
2		W-61-INT-110816-SED-03		SS	1330							
3		W-61-LOW-110816-SED-03		SS	1400							
4		W-61-MED-110816-SED-03		SS	1415							
5		W-63-HIGH-110816-SED-03		SS	1610							
6		W-63-INT-110816-SED-03		SS	1640							
7		W-63-LOW-110816-SED-03		SS	1630							
8		W-63-MED-110816-SED-03		SS	1620							
9												
10												
11												
12												
For Laboratory Use Only			Matrix Codes:			Relinquished By:		Received By:		Received By:		
COC Seal: Yes		Comments:	FW: Fresh Water WW: Waste Water SB: Sea and Brackish Water SS: Soil and Sediment TS: Plant and Animal Tissue HC: Hydrocarbons TR: Trap OT: Other			Name: BRAD WATF		Name: LEO MITLET		Name:		
Cooler Temp: 1.90C						Organization: AFW		Organization: LSPS		Organization:		
Carrier: FedEx						Date & Time: 11/9/16 1100		Date & Time: 11/10/16 9:30		Date & Time:		
VTSR: 9:50						Tracking number: 9020 5603 2874						
Sample Disposal:						By signing, you declare that you agree with EFGS' terms and conditions, and that you authorize EFGS to perform the specified analyses.						
<input type="checkbox"/> Return (shipping fees may apply)						Customer Approval: _____ Date: _____						
<input checked="" type="checkbox"/> Standard Disposal - 30 Days after report												
<input type="checkbox"/> Retain for _____ weeks after report (storage fees may apply)												

PROJECT #  
3616166652.04.04  
FOD EX1 #  
9020 5603 2874  
1 cooler  
NOTE: USE VOLUMES FROM JAR FOR BOTH Hg & MeHg



AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

**W-61-HIGH\_110816\_SED\_03**  
**1611323-01**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
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**Sample Preparation: EFGS-019 Solids Analysis**

% Solids	30.8	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
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**Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg**

Methyl Mercury (as Mercury)	4.87	0.044	0.151	ng/g dry	1	F612292	05-Dec-16	6L07016	07-Dec-16	EPA 1630 Mod/FGS-070	
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**Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg**

Mercury	318	17.3	157	ng/g dry	1000	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	
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Amy Goodall, Project Manager



AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**W-61-INT\_110816\_SED\_03**  
**1611323-02**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-019 Solids Analysis</b>											
% Solids	28.4	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
<b>Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg</b>											
Methyl Mercury (as Mercury)	5.59	0.044	0.151	ng/g dry	1	F612292	05-Dec-16	6L07016	07-Dec-16	EPA 1630 Mod/FGS-070	
<b>Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg</b>											
Mercury	980	16.8	153	ng/g dry	1000	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	

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Amy Goodall, Project Manager



AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**W-61-LOW\_110816\_SED\_03**  
**1611323-03**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-019 Solids Analysis</b>											
% Solids	35.1	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
<b>Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg</b>											
Methyl Mercury (as Mercury)	18.8	0.379	1.29	ng/g dry	10	F612292	07-Dec-16	6L08027	07-Dec-16	EPA 1630 Mod/FGS-070	
<b>Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg</b>											
Mercury	773	15.4	140	ng/g dry	1000	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	

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Amy Goodall, Project Manager



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511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**W-61-MID\_110816\_SED\_03**  
**1611323-04**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-019 Solids Analysis</b>											
% Solids	41.7	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
<b>Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg</b>											
Methyl Mercury (as Mercury)	6.65	0.300	1.02	ng/g dry	10	F612292	07-Dec-16	6L08027	07-Dec-16	EPA 1630 Mod/FGS-070	
<b>Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg</b>											
Mercury	682	11.9	109	ng/g dry	1000	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	

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Amy Goodall, Project Manager





AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

**W-63-HIGH\_110816\_SED\_03**  
**1611323-05**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-019 Solids Analysis</b>											
% Solids	77.7	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
<b>Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg</b>											
Methyl Mercury (as Mercury)	0.232	0.018	0.060	ng/g dry	1	F612292	07-Dec-16	6L08027	07-Dec-16	EPA 1630 Mod/FGS-070	
<b>Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg</b>											
Mercury	37.9	0.66	5.98	ng/g dry	100	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	

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Amy Goodall, Project Manager



AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**W-63-INT\_110816\_SED\_03**  
**1611323-06**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-019 Solids Analysis</b>											
% Solids	29.9	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
<b>Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg</b>											
Methyl Mercury (as Mercury)	11.2	0.453	1.55	ng/g dry	10	F612292	07-Dec-16	6L08027	07-Dec-16	EPA 1630 Mod/FGS-070	
<b>Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg</b>											
Mercury	1050	16.0	145	ng/g dry	1000	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	

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Amy Goodall, Project Manager



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511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**W-63-LOW\_110816\_SED\_03**  
**1611323-07**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-019 Solids Analysis</b>											
% Solids	65.3	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
<b>Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg</b>											
Methyl Mercury (as Mercury)	2.25	0.019	0.066	ng/g dry	1	F612292	07-Dec-16	6L08027	07-Dec-16	EPA 1630 Mod/FGS-070	
<b>Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg</b>											
Mercury	217	7.57	68.9	ng/g dry	1000	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	

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Amy Goodall, Project Manager



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Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

**W-63-MID\_110816\_SED\_03**  
**1611323-08**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-019 Solids Analysis</b>											
% Solids	55.7	0.1	0.1	% by Weight	1	F611535	01-Dec-16		02-Dec-16	SM 2540B	O-04, O-09
<b>Sample Preparation: EFGS-045 MeCl2 Extraction for Methyl Hg</b>											
Methyl Mercury (as Mercury)	6.96	0.224	0.765	ng/g dry	10	F612292	07-Dec-16	6L08027	07-Dec-16	EPA 1630 Mod/FGS-070	
<b>Sample Preparation: EFGS-066 Cold Aqua Regia Digestion for Hg</b>											
Mercury	222	8.60	78.3	ng/g dry	1000	F611534	01-Dec-16	6L07020	06-Dec-16	EPA 1631B	

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Amy Goodall, Project Manager

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511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6L07016 - F612292</b>											
<b>Cal Standard (6L07016-CAL1)</b> Prepared & Analyzed: 06-Dec-16											
Methyl Mercury (as Mercury)	0.041	-		ng/L	0.050050		82.0				
<b>Cal Standard (6L07016-CAL2)</b> Prepared & Analyzed: 06-Dec-16											
Methyl Mercury (as Mercury)	0.202	-		ng/L	0.20020		101				
<b>Cal Standard (6L07016-CAL3)</b> Prepared & Analyzed: 06-Dec-16											
Methyl Mercury (as Mercury)	1.008	-		ng/L	1.0010		101				
<b>Cal Standard (6L07016-CAL4)</b> Prepared & Analyzed: 06-Dec-16											
Methyl Mercury (as Mercury)	2.052	-		ng/L	2.0020		103				
<b>Cal Standard (6L07016-CAL5)</b> Prepared & Analyzed: 06-Dec-16											
Methyl Mercury (as Mercury)	4.545	-		ng/L	4.0040		114				
<b>Calibration Blank (6L07016-CCB1)</b> Prepared: 06-Dec-16 Analyzed: 07-Dec-16											
Methyl Mercury (as Mercury)	0.009	-		ng/L							
<b>Calibration Blank (6L07016-CCB2)</b> Prepared: 06-Dec-16 Analyzed: 07-Dec-16											
Methyl Mercury (as Mercury)	0.011	-		ng/L							
<b>Calibration Blank (6L07016-CCB3)</b> Prepared: 06-Dec-16 Analyzed: 07-Dec-16											
Methyl Mercury (as Mercury)	0.023	-		ng/L							
<b>Calibration Blank (6L07016-CCB4)</b> Prepared: 06-Dec-16 Analyzed: 07-Dec-16											
Methyl Mercury (as Mercury)	0.014	-		ng/L							
<b>Calibration Check (6L07016-CCV1)</b> Prepared: 06-Dec-16 Analyzed: 07-Dec-16											
Methyl Mercury (as Mercury)	0.448	-		ng/L	0.50049		89.6	67-133			

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Amy Goodall, Project Manager

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511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6L07016 - F612292**

<b>Calibration Check (6L07016-CCV2)</b>					Prepared: 06-Dec-16 Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.432	-		ng/L	0.50049		86.4	67-133			
<b>Calibration Check (6L07016-CCV3)</b>					Prepared: 06-Dec-16 Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.495	-		ng/L	0.50049		99.0	67-133			
<b>Calibration Check (6L07016-CCV4)</b>					Prepared: 06-Dec-16 Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.489	-		ng/L	0.50049		97.7	67-133			
<b>Instrument Blank (6L07016-IBL1)</b>					Prepared & Analyzed: 06-Dec-16						
Methyl Mercury (as Mercury)	ND	0.017	0.058	ng/L							U
<b>Initial Cal Blank (6L07016-ICB1)</b>					Prepared: 06-Dec-16 Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.014	-		ng/L							
<b>Initial Cal Check (6L07016-ICV1)</b>					Prepared & Analyzed: 06-Dec-16						
Methyl Mercury (as Mercury)	0.489	-		ng/L	0.50049		97.8	67-133			

**Batch 6L07020 - F612277**

<b>Cal Standard (6L07020-CAL1)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.50	-		ng/L	0.50100		99.6				
<b>Cal Standard (6L07020-CAL2)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	1.00	-		ng/L	1.0020		99.5				
<b>Cal Standard (6L07020-CAL3)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	5.02	-		ng/L	5.0100		100				

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511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6L07020 - F612277</b>											
<b>Cal Standard (6L07020-CAL4)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	19.72	-		ng/L	20.040		98.4				
<b>Cal Standard (6L07020-CAL5)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	40.62	-		ng/L	40.080		101				
<b>Calibration Blank (6L07020-CCB1)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.10	-		ng/L							
<b>Calibration Blank (6L07020-CCB2)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.10	-		ng/L							
<b>Calibration Blank (6L07020-CCB3)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.32	-		ng/L							
<b>Calibration Blank (6L07020-CCB4)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.09	-		ng/L							
<b>Calibration Blank (6L07020-CCB5)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.04	-		ng/L							
<b>Calibration Blank (6L07020-CCB6)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.20	-		ng/L							
<b>Calibration Blank (6L07020-CCB7)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.17	-		ng/L							
<b>Calibration Blank (6L07020-CCB8)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	0.15	-		ng/L							

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511 Congress Street  
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Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 6L07020 - F612277

<b>Calibration Blank (6L07020-CCB9)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	0.10	-		ng/L								
<b>Calibration Blank (6L07020-CCBA)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	0.15	-		ng/L								
<b>Calibration Check (6L07020-CCV1)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	5.04	-		ng/L	5.0000		101	77-123				
<b>Calibration Check (6L07020-CCV2)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	4.85	-		ng/L	5.0000		96.9	77-123				
<b>Calibration Check (6L07020-CCV3)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	4.95	-		ng/L	5.0000		98.9	77-123				
<b>Calibration Check (6L07020-CCV4)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	4.69	-		ng/L	5.0000		93.8	77-123				
<b>Calibration Check (6L07020-CCV5)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	4.67	-		ng/L	5.0000		93.3	77-123				
<b>Calibration Check (6L07020-CCV6)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	4.94	-		ng/L	5.0000		98.9	77-123				
<b>Calibration Check (6L07020-CCV7)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	4.88	-		ng/L	5.0000		97.6	77-123				
<b>Calibration Check (6L07020-CCV8)</b>												Prepared & Analyzed: 06-Dec-16
Mercury	5.11	-		ng/L	5.0000		102	77-123				

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Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6L07020 - F612277</b>											
<b>Calibration Check (6L07020-CCV9)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	4.95	-		ng/L	5.0000		99.1	77-123			
<b>Calibration Check (6L07020-CCVA)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	4.96	-		ng/L	5.0000		99.1	77-123			
<b>Instrument Blank (6L07020-IBL1)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	ND	0.005	0.05	ng/L							U
<b>Instrument Blank (6L07020-IBL2)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	ND	0.005	0.05	ng/L							U
<b>Instrument Blank (6L07020-IBL3)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	ND	0.005	0.05	ng/L							U
<b>Initial Cal Check (6L07020-ICV1)</b>					Prepared & Analyzed: 06-Dec-16						
Mercury	4.99	-		ng/L	5.0000		99.8	77-123			
<b>Batch 6L08027 - F612292</b>											
<b>Cal Standard (6L08027-CAL1)</b>					Prepared & Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.046	-		ng/L	0.050050		91.7				
<b>Cal Standard (6L08027-CAL2)</b>					Prepared & Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.213	-		ng/L	0.20020		106				
<b>Cal Standard (6L08027-CAL3)</b>					Prepared & Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.932	-		ng/L	1.0010		93.1				

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Amy Goodall, Project Manager

AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 6L08027 - F612292</b>											
<b>Cal Standard (6L08027-CAL4)</b>					Prepared & Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	2.137	-		ng/L	2.0020		107				
<b>Cal Standard (6L08027-CAL5)</b>					Prepared & Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	4.075	-		ng/L	4.0040		102				
<b>Calibration Blank (6L08027-CCB1)</b>					Prepared: 07-Dec-16 Analyzed: 08-Dec-16						
Methyl Mercury (as Mercury)	0.016	-		ng/L							
<b>Calibration Blank (6L08027-CCB2)</b>					Prepared: 07-Dec-16 Analyzed: 08-Dec-16						
Methyl Mercury (as Mercury)	0.014	-		ng/L							
<b>Calibration Blank (6L08027-CCB3)</b>					Prepared: 07-Dec-16 Analyzed: 08-Dec-16						
Methyl Mercury (as Mercury)	0.007	-		ng/L							
<b>Calibration Blank (6L08027-CCB4)</b>					Prepared: 07-Dec-16 Analyzed: 08-Dec-16						
Methyl Mercury (as Mercury)	0.007	-		ng/L							
<b>Calibration Check (6L08027-CCV1)</b>					Prepared & Analyzed: 07-Dec-16						
Methyl Mercury (as Mercury)	0.477	-		ng/L	0.50049		95.3	67-133			
<b>Calibration Check (6L08027-CCV2)</b>					Prepared: 07-Dec-16 Analyzed: 08-Dec-16						
Methyl Mercury (as Mercury)	0.414	-		ng/L	0.50049		82.7	67-133			
<b>Calibration Check (6L08027-CCV3)</b>					Prepared: 07-Dec-16 Analyzed: 08-Dec-16						
Methyl Mercury (as Mercury)	0.380	-		ng/L	0.50049		76.0	67-133			
<b>Calibration Check (6L08027-CCV4)</b>					Prepared: 07-Dec-16 Analyzed: 08-Dec-16						
Methyl Mercury (as Mercury)	0.393	-		ng/L	0.50049		78.5	67-133			

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Amy Goodall, Project Manager



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511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

Reported:  
19-Dec-16 09:50

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 6L08027 - F612292

Instrument Blank (6L08027-IBL1)

Prepared & Analyzed: 07-Dec-16

Methyl Mercury (as Mercury)	ND	0.017	0.058	ng/L							U
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Initial Cal Blank (6L08027-ICB1)

Prepared & Analyzed: 07-Dec-16

Methyl Mercury (as Mercury)	0.018	-		ng/L							
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Initial Cal Check (6L08027-ICV1)

Prepared & Analyzed: 07-Dec-16

Methyl Mercury (as Mercury)	0.523	-		ng/L	0.50049		104	67-133			
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Batch F611534 - EFGS-066 Cold Aqua Regia Digestion for Hg

Blank (F611534-BLK1)

Prepared: 01-Dec-16 Analyzed: 06-Dec-16

Mercury	0.59	0.11	1.00	ng/g wet							J
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Blank (F611534-BLK2)

Prepared: 01-Dec-16 Analyzed: 06-Dec-16

Mercury	0.18	0.11	1.00	ng/g wet							J
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Blank (F611534-BLK3)

Prepared: 01-Dec-16 Analyzed: 06-Dec-16

Mercury	0.11	0.11	1.00	ng/g wet							J
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LCS (F611534-BS1)

Prepared: 01-Dec-16 Analyzed: 06-Dec-16

Mercury	7.77	0.11	1.00	ng/g wet	8.0160		96.9	75-125			
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LCS Dup (F611534-BSD1)

Prepared: 01-Dec-16 Analyzed: 06-Dec-16

Mercury	7.93	0.11	1.00	ng/g wet	8.0160		98.9	75-125	2.01	24	
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Duplicate (F611534-DUP1)

Source: 1611249-07

Prepared: 01-Dec-16 Analyzed: 06-Dec-16

Mercury	1112	8.38	76.3	ng/g dry		1255			12.1	24	
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Amy Goodall, Project Manager

AMEC Foster Wheeler 511 Congress Street Portland ME, 04101	Project: Penobscot Sediments Hg and Methyl Hg 2016 Project Number: Penobscot Sediments Hg and Methyl Hg 2016 Project Manager: Denise King	<b>Reported:</b> 19-Dec-16 09:50
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**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch F611534 - EFGS-066 Cold Aqua Regia Digestion for Hg**

<b>Matrix Spike (F611534-MS1)</b>		<b>Source: 1611249-07</b>		Prepared: 01-Dec-16 Analyzed: 06-Dec-16							
Mercury	1825	8.62	78.5	ng/g dry	627.63	1255	90.8	71-125			
<b>Matrix Spike (F611534-MS2)</b>		<b>Source: 1611323-01</b>		Prepared: 01-Dec-16 Analyzed: 06-Dec-16							
Mercury	1505	16.2	148	ng/g dry	1181.7	318.2	100	71-125			
<b>Matrix Spike Dup (F611534-MSD1)</b>		<b>Source: 1611249-07</b>		Prepared: 01-Dec-16 Analyzed: 06-Dec-16							
Mercury	1885	9.21	83.8	ng/g dry	670.47	1255	94.0	71-125	3.41	24	
<b>Matrix Spike Dup (F611534-MSD2)</b>		<b>Source: 1611323-01</b>		Prepared: 01-Dec-16 Analyzed: 06-Dec-16							
Mercury	1417	15.7	143	ng/g dry	1144.4	318.2	96.0	71-125	4.49	24	

**Batch F612292 - EFGS-045 MeCl2 Extraction for Methyl Hg**

<b>Blank (F612292-BLK1)</b>				Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	ND	0.015	0.050	ng/g wet							U
<b>Blank (F612292-BLK2)</b>				Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	ND	0.015	0.050	ng/g wet							U
<b>Blank (F612292-BLK3)</b>				Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	ND	0.015	0.050	ng/g wet							U
<b>Blank (F612292-BLK4)</b>				Prepared & Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	ND	0.015	0.050	ng/g wet							U
<b>Blank (F612292-BLK5)</b>				Prepared & Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	ND	0.015	0.050	ng/g wet							U

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Amy Goodall, Project Manager

AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch F612292 - EFGS-045 MeCl2 Extraction for Methyl Hg**

<b>Blank (F612292-BLK6)</b>				Prepared & Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	ND	0.015	0.050	ng/g wet							U
<b>LCS (F612292-BS1)</b>				Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	3.866	0.148	0.503	ng/g wet	5.0050		77.2	70-130			
<b>LCS Dup (F612292-BSD1)</b>				Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	3.921	0.148	0.503	ng/g wet	5.0050		78.3	70-130	1.40	35	
<b>Duplicate (F612292-DUP1)</b>				Source: 1611249-07 Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	0.767	0.023	0.079	ng/g dry		0.615			22.1	35	
<b>Matrix Spike (F612292-MS1)</b>				Source: 1611249-07 Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	7.113	0.232	0.791	ng/g dry	7.8671	0.615	82.6	65-130			
<b>Matrix Spike (F612292-MS2)</b>				Source: 1611323-01 Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	20.16	0.439	1.50	ng/g dry	14.906	4.871	103	65-130			
<b>Matrix Spike Dup (F612292-MSD1)</b>				Source: 1611249-07 Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	7.170	0.230	0.785	ng/g dry	7.8007	0.615	84.0	65-130	1.71	35	
<b>Matrix Spike Dup (F612292-MSD2)</b>				Source: 1611323-01 Prepared: 05-Dec-16 Analyzed: 07-Dec-16							
Methyl Mercury (as Mercury)	18.19	0.437	1.49	ng/g dry	14.805	4.871	89.9	65-130	13.2	35	

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Amy Goodall, Project Manager



AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

**Quality Control Data**

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch F611535 - EFGS-019 Solids Analysis**

<b>Duplicate (F611535-DUP1)</b>		<b>Source: 1611249-07</b>			<b>Prepared: 01-Dec-16 Analyzed: 02-Dec-16</b>					
% Solids	56.4	0.1	0.1	% by Weight		56.4		0.00	10	
<b>Duplicate (F611535-DUP2)</b>		<b>Source: 1611323-01</b>			<b>Prepared: 01-Dec-16 Analyzed: 02-Dec-16</b>					
% Solids	31.6	0.1	0.1	% by Weight		30.8		2.56	10	

Eurofins Frontier Global Sciences, Inc.

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Amy Goodall, Project Manager

AMEC Foster Wheeler  
511 Congress Street  
Portland ME, 04101

Project: Penobscot Sediments Hg and Methyl Hg 2016  
Project Number: Penobscot Sediments Hg and Methyl Hg 2016  
Project Manager: Denise King

**Reported:**  
19-Dec-16 09:50

### Notes and Definitions

- U Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
- QR-08 The RPD value for the MS/MSD was outside of acceptance limits. Batch QC acceptable based on matrix duplicate and/or LCS/LCSD RPD values within control limits.
- O-09 Total Solids are prepared at the same time as the preparation for the analyte(s) of interest in order to provide the most accurate dry mass correction.
- O-04 This sample was analyzed outside of the recommended holding time.
- J The result is an estimated concentration.
- E-01 Sample was preceded by a sample exceeding the calibration curve and was reanalyzed for confirmation.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference





# Frontier Global Sciences

## Total Solids Dataset Cover Page

**Dataset ID:** TS161201-1  
**Batch ID:** F611535  
**Work Order(s):** 1611242, 1611249, 1611323

**Analyst:** AMB/JS  
**Prep. Date:** 12/1/2016

### Analytical Issues/Explanations:

QUALITY ASSURANCE  
PEER-REVIEWED  
INITIALS: BC 12/5/16



Remote Lab Total Solids Logbook

Lab Technician(s): AMB / JS Batch: F611535 Date: 12-1-16 Page 1 of 1  
 Thermometer #: 140425541 Oven #: OVN-12 Actual temperature: 103.2 (Range 103-105°C)  
 Balance #<sup>1</sup>: 19 Start time: 1736 End time<sup>2</sup>: 1110 Time re-weighed<sup>3</sup>: 1113  
 Client(s)/WO#: 1611249, 1611242, 1611323

Sample ID	Pan #	Pan (g)	Pan + Wet Sample (g)	Pan + Dry Sample (g)	Notes
1611242-12	1	1.0015	6.1978	3.9318	
1611242-13	2	1.0283	6.3822	4.5734	
1611242-14	3	1.0136	6.6719	<del>5.6673</del> 5.667 <sup>12/1/16 JS</sup>	
1611249-01	4	0.9946	6.8281	5.2553	
1611249-02	5	1.0532	6.2611	5.1864	
1611249-03	6	0.9926	6.6471	3.5489	
1611249-04	7	0.9991	6.4416	<del>3.5565</del> 3.555 <sup>12/3/16 JS</sup>	
1611249-05	8	1.0015	6.3802	3.5275	
1611249-06	9	1.0301	6.3472	3.9404	
1611249-07	10	1.0244	6.2745	3.9834	
F611535-DUP1	11	1.0519	6.1476	3.9252	Source: 1611249-07
1611249-08	12	1.0499	6.3550	4.0459	
1611249-09	13	1.0529	6.6187	3.9103	
1611323-01	14	1.0914	6.3930	2.7217	A lot of plant matter. AMB 12-1-16
*F611535-DUP2	15	1.0655	6.8339	2.8898	A lot of plant matter. AMB 12-1-16
1611323-02	16	1.0287	6.5042	2.5813	
1611323-03	17	1.0470	6.7248	3.0406	A lot of plant matter. AMB 12-1-16
1611323-04	18	1.0100	6.6956	3.3836	A lot of plant matter. AMB 12-1-16
1611323-05	19	0.9613	6.9161	5.5896	A lot of plant matter. AMB 12-1-16
1611323-06	20	0.9874	<del>6.8240</del> 6.8240 <sup>12-1-16</sup>	2.7335	
1611323-07	21	1.0485	6.4443	4.5731	A lot of plant matter. AMB 12-1-16
1611323-08	22	1.0370	6.6213	4.1452	A lot of plant matter. AMB 12-1-16
AMB # 12-1-16					

Comments:

Plant matter looked like roots and bark. AMB

12-1-16

EFGS / Remote Lab Total Solids / LOG-HG-032.01 / Effective: Feb. 21, 2013 / QA2015-134

<sup>1</sup>The same balance must be used to weight samples before and after ovening.

<sup>2</sup>Samples must be ovened over 12 hours.

<sup>3</sup>Samples must be re-weighed within 30 minutes of oven cool down.

\*F611535-DUP2 SOURCE

IS 1611323-01. AMB 12-1-16

Preparation Date: Dec 1, 2016

Batch #: 1

Analyst: AMB/JS

Batch ID: F611535

Work Order(s): 1611242, 1611249, 1611323

Pan ID	Sample ID	Pan Wt (g)	Pan + Sample Wet (g)	Wet Sample (g)	Pan + Sample Dry (g)	Dry Sample (g)	% TS	Notes
1	1611242-12	1.0015	6.1978	5.1963	3.9318	2.9303	56.4%	
2	1611242-13	1.0283	6.3822	5.3539	4.5734	3.5451	66.2%	
3	1611242-14	1.0136	6.6719	5.6583	5.6673	4.6537	82.2%	
4	1611249-01	0.9946	6.8281	5.8335	5.2553	4.2607	73.0%	
5	1611249-02	1.0532	6.2611	5.2079	5.1864	4.1332	79.4%	
6	1611249-03	0.9926	6.6471	5.6545	3.5489	2.5563	45.2%	
7	1611249-04	0.9991	6.4416	5.4425	3.5565	2.5574	47.0%	
8	1611249-05	1.0015	6.3802	5.3787	3.5275	2.5260	47.0%	
9	1611249-06	1.0301	6.3472	5.3171	3.9404	2.9103	54.7%	
10	1611249-07	1.0244	6.2745	5.2501	3.9834	2.9590	56.4%	
11	1611249-07MD	1.0519	6.1476	5.0957	3.9252	2.8733	56.4%	0.0%
12	1611249-08	1.0499	6.3550	5.3051	4.0459	2.9960	56.5%	
13	1611249-09	1.0529	6.6187	5.5658	3.9103	2.8574	51.3%	
14	1611323-01	1.0914	6.3930	5.3016	2.7217	1.6303	30.8%	
15	1611323-01MD	1.0655	6.8339	5.7684	2.8898	1.8243	31.6%	2.8%
16	1611323-02	1.0287	6.5042	5.4755	2.5813	1.5526	28.4%	
17	1611323-03	1.0470	6.7248	5.6778	3.0406	1.9936	35.1%	
18	1611323-04	1.0100	6.6956	5.6856	3.3836	2.3736	41.7%	
19	1611323-05	0.9613	6.9161	5.9548	5.5896	4.6283	77.7%	
20	1611323-06	0.9874	6.8240	5.8366	2.7335	1.7461	29.9%	
21	1611323-07	1.0485	6.4443	5.3958	4.5731	3.5246	65.3%	
22	1611323-08	1.0370	6.6213	5.5843	4.1452	3.1082	55.7%	

PREPARATION BENCH SHEET

F611535

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-019 Solids Analysis

Prepared: 12/1/2016

Lab Number	Sample ID and Source Sample	Initial (g)	Final (g)	Spike1 ID	$\mu$ l Spike1	Spike2 ID	$\mu$ l Spike2	Extraction Comments
F611535-DUP1	Duplicate [1611249-07]	5	5					
F611535-DUP2	Duplicate [1611323-01]	5	5					

Standard ID(s):      Description:

Expiration:

**PREPARATION BENCH SHEET**

F611535

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: AFS - EFGS-019 Solids Analysis**

**Prepared: 12/1/2016**

Lab Number	Sample ID	Initial (g)	Final (g)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-12	NB03SED-CHM333 8678451	5	5	-	-	-	Preservation Blank Created	
1611242-13	NB03SED-CHM334 8678453	5	5	-	-	-	Preservation Blank Created	
1611242-14	NB03SED-CHM390 8678455	5	5	-	-	-	Preservation Blank Created	
1611249-01	NB03SED-CHM332 8680694	5	5	-	-	-	Preservation Blank Created	
1611249-02	NB03SED-CHM381 8680696	5	5	-	-	-	Preservation Blank Created	
1611249-03	NB03SED-CHM328 8680698	5	5	-	-	-	Preservation Blank Created	
1611249-04	NB03SED-CHM327 8680700	5	5	-	-	-	Preservation Blank Created	
1611249-05	NB03SEDDUP-11 8680702	5	5	-	-	-	Preservation Blank Created	
1611249-06	NB03SED-CHM380 8680704	5	5	-	-	-	Preservation Blank Created	
1611249-07	NB03SED-CHM326 8680708	5	5	QC	-	-	MS/MSD	
1611249-08	NB03SED-CHM326 DUP 8680711	5	5	-	-	-	Preservation Blank Created	
1611249-09	NB03SED-CHM341 8680713	5	5	-	-	-	Preservation Blank Created	
1611323-01	W-61-HIGH_110816_SED_03	5	5	-	-	-		
1611323-02	W-61-INT_110816_SED_03	5	5	-	-	-		
1611323-03	W-61-LOW_110816_SED_03	5	5	-	-	-		
1611323-04	W-61-MID_110816_SED_03	5	5	-	-	-		
1611323-05	W-63-HIGH_110816_SED_03	5	5	-	-	-		
1611323-06	W-63-INT_110816_SED_03	5	5	-	-	-		
1611323-07	W-63-LOW_110816_SED_03	5	5	-	-	-		

Page 30 of 234

Due Date: 12/8/2016

PREPARATION BENCH SHEET

F611535

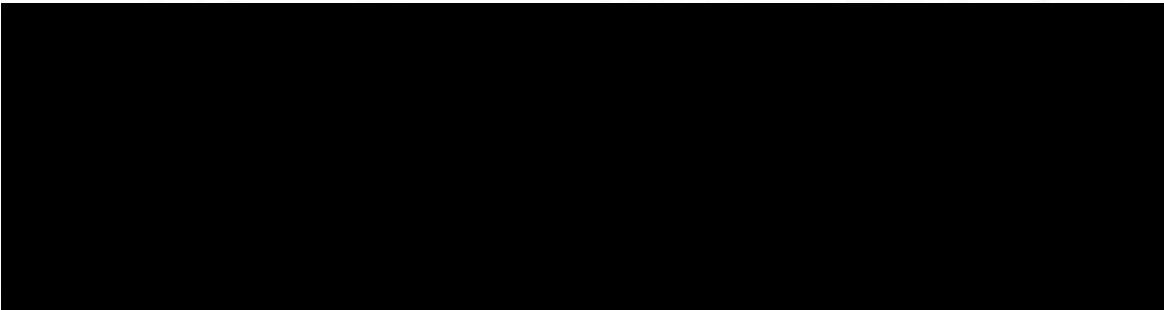
Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-019 Solids Analysis

Prepared: 12/1/2016

1611323-08	W-63-MID_110816_SED_03	5	5	-	-	-	
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# Peer Review Checklist for Total Solids and Density (SOP EFGS-019)

Analyst: JS

Date: 12/2/16

Reviewer: Beck

Date: 12/5/16

WO #: 1611242, 1611249,  
1611323

Batch #: F611535

Dataset ID: TS161201-2

Reviewer Initials: Be

### General Comments/Re-run requirements:

Select	SOP	Method	Matrix
<input checked="" type="checkbox"/>	EFGS-019	TS	S/T
<input type="checkbox"/>	EFGS-019	Density	Liquids

Initials	SOP Date	
<u>JS</u>	<u>11/18/16</u>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>

Reviewer Initials: Be

### 1. Total Solids

- A. Check for transcription errors from Benchsheet/Raw Data
  - (i) Do sample ID(s) match?
  - (ii) Do masses/volumes match?
  - (iii) Are the analyst name, dataset ID, and preparation date listed?
  - (iv) Does the LIMS benchsheet prep date match the actual prep date?
- B. Does the batch include 1 MD/MT per 10 client samples?
- C. MD RPD/MT RSD ≤ 10%
- D. Are qualifiers, O-04 and O-09, included for samples analyzed out of hold time?

<input type="checkbox"/> Density Only - NA this section			
<input checked="" type="checkbox"/> DONE			<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> PASS	<input type="checkbox"/> FAIL		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/>

### 2. Density

- A. Check for transcription errors from Benchsheet/Raw Data
  - (i) Do sample ID(s) match?
  - (ii) Do masses/volumes match?
  - (iii) Are the analyst name, dataset ID, and preparation date listed?
  - (iv) Does the LIMS benchsheet prep date match the actual prep date?
  - (v) Volume (if other than 1 mL): \_\_\_\_\_ Can the calculated result be reproduced?

<input checked="" type="checkbox"/> Total Solids Only - NA this section			
<input type="checkbox"/> DONE			<input type="checkbox"/>
<input type="checkbox"/> YES	<input type="checkbox"/> NO		<input type="checkbox"/>
<input type="checkbox"/> YES	<input type="checkbox"/> NO		<input type="checkbox"/>
<input type="checkbox"/> YES	<input type="checkbox"/> NO		<input type="checkbox"/>
<input type="checkbox"/> YES	<input type="checkbox"/> NO		<input type="checkbox"/>
<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A	<input type="checkbox"/>



Frontier Global Sciences

# MMHg27001-161206-1

## Analysis Datasheet for Methyl Mercury in Soil/Tissue

Date of Analysis: December 06, 2016

Analyst: RN

Instrument #: Hg2700-1

Units ng/L

LIMS Sequence #: 6L07016

### Calibration Statistics:

LabNumber	n	True Val	Area	Uncorrected Response Factor	Corrected Peak Height	Corrected Response Factor	% Recovery
SEQ-CAL1	1	0.05 ng/L	24.12 units	482.36	24.12 units	482.36	82.0 %Rec
SEQ-CAL2	1	0.20 ng/L	118.64 units	593.21	118.64 units	593.21	100.9 %Rec
SEQ-CAL3	1	1.00 ng/L	592.84 units	592.84	592.84 units	592.84	100.8 %Rec
SEQ-CAL4	1	2.00 ng/L	1206.54 units	603.27	1206.54 units	603.27	102.6 %Rec
SEQ-CAL5	1	4.00 ng/L	2672.37 units	668.09	2672.37 units	668.09	113.6 %Rec
SEQ-CAL6	0						
SEQ-CAL7	0						
SEQ-CAL8	0						
SEQ-CAL9	0						

**Corr. Mean RF**    **Corr. St Dev RF**    **Corr. RSD CF**    **Uncorr. Mean RF**  
 587.95            +/- 66.82            11.4% RSD            587.95

### Blanks:

LabNumber	n	Mean	Std Dev	Mean (ng/L)	Std Dev (ng/L)
SEQ-IBL	1	0.00 units		0.00 ng/L	#VALUE!

### Preparation Blanks

Sample Type	Batch ID	n	Mean	Std Dev
BLK	1	6	0.016 ng/L	±0.002
BLK	2	0	0.000 ng/L	
BLK	3	0	0.000 ng/L	
BLK	4	0	0.000 ng/L	
BLK	5	0	0.000 ng/L	

QUANTITY ASSURANCE  
 REVIEWED  
 12/8/16

Instrument	Analyst	Sample		Dilution	Analyzed	FileID	Run End	Uncorrected Response	Batch ID	No PB		InitialResult	FinalResult	InitialUnits	Comments	
		Type	LabNumber							Correction?	RESP					
Hg2700-1	RN	CAL	SEQ-1BL1	1	12/6/16 22:53	18690-1.RAW	22:53:24	0.00				0.0	0.000	0.000	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL1	1	12/6/16 23:03	18691-1.RAW	23:03:55	24.12				24.1	0.041	0.041	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL2	1	12/6/16 23:14	18692-1.RAW	23:14:26	118.64				118.6	0.202	0.202	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL3	1	12/6/16 23:24	18693-1.RAW	23:24:57	592.84				592.8	1.008	1.008	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL4	1	12/6/16 23:35	18694-1.RAW	23:35:27	1206.54				1206.5	2.052	2.052	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL5	1	12/6/16 23:45	18695-1.RAW	23:45:58	2672.37				2672.4	4.545	4.545	ng/L	
Hg2700-1	RN	CAL	SEQ-1CV1	1	12/6/16 23:56	18696-1.RAW	23:56:29	287.65				287.6	0.489	0.489	ng/L	
Hg2700-1	RN	CAL	SEQ-1CB1	1	12/7/16 0:07	18697-1.RAW	0:07:00	8.18				8.2	0.014	0.014	ng/L	
Hg2700-1	RN	BLK	F612262-BLK4	1	12/7/16 0:17	18698-1.RAW	0:17:31	11.57		1		11.5	0.020	0.020	ng/L	
Hg2700-1	RN	BLK	F612262-BLK5	1	12/7/16 0:28	18699-1.RAW	0:28:02	9.66		1		9.7	0.016	0.016	ng/L	
Hg2700-1	RN	BLK	F612262-BLK6	1	12/7/16 0:38	18700-1.RAW	0:38:33	9.82		1		9.8	0.017	0.017	ng/L	
Hg2700-1	RN	SAM	1611242-04RE1	5	12/7/16 0:49	18701-1.RAW	0:49:03	579.89		1		579.9	0.983	0.983	ng/L	
Hg2700-1	RN	SAM	1611242-11RE1	5	12/7/16 0:59	18702-1.RAW	0:59:34	153.57		1		153.6	0.258	0.258	ng/L	
Hg2700-1	RN	BLK	F612292-BLK1	1	12/7/16 1:10	18703-1.RAW	1:10:05	9.66		1		9.7	0.016	0.016	ng/L	
Hg2700-1	RN	BLK	F612292-BLK2	1	12/7/16 1:20	18704-1.RAW	1:20:36	7.35		1		7.4	0.013	0.013	ng/L	
Hg2700-1	RN	BLK	F612292-BLK3	1	12/7/16 1:31	18705-1.RAW	1:31:06	8.22		1		8.2	0.014	0.014	ng/L	
Hg2700-1	RN	SAM	F612292-BS1	10	12/7/16 1:41	18706-1.RAW	1:41:37	455.58		1		455.6	0.773	0.773	ng/L	
Hg2700-1	RN	SAM	F612292-BSD1	10	12/7/16 1:52	18707-1.RAW	1:52:08	461.99		1		462.0	0.784	0.784	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV1	1	12/7/16 2:02	18708-1.RAW	2:02:39	263.57				263.6	0.448	0.448	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB1	1	12/7/16 2:13	18709-1.RAW	2:13:09	5.32				5.3	0.009	0.009	ng/L	
Hg2700-1	RN	SAM	1611242-12	1	12/7/16 2:23	18710-1.RAW	2:23:40	504.22		1		504.2	0.842	0.842	ng/L	
Hg2700-1	RN	SAM	1611242-13	1	12/7/16 2:34	18711-1.RAW	2:34:11	411.69		1		411.7	0.684	0.684	ng/L	
Hg2700-1	RN	SAM	1611242-14	1	12/7/16 2:44	18712-1.RAW	2:44:42	213.48		1		213.5	0.347	0.347	ng/L	
Hg2700-1	RN	SAM	1611249-01	1	12/7/16 2:55	18713-1.RAW	2:55:12	348.82		1		348.8	0.577	0.577	ng/L	
Hg2700-1	RN	SAM	1611249-02	1	12/7/16 3:05	18714-1.RAW	3:05:45	269.21		1		269.2	0.442	0.442	ng/L	
Hg2700-1	RN	SAM	1611249-03	1	12/7/16 3:16	18715-1.RAW	3:16:16	593.48		1		593.5	0.993	0.993	ng/L	
Hg2700-1	RN	SAM	1611249-04	1	12/7/16 3:26	18716-1.RAW	3:26:47	162.39		1		162.4	0.260	0.260	ng/L	
Hg2700-1	RN	SAM	1611249-05	1	12/7/16 3:37	18717-1.RAW	3:37:17	134.80		1		134.8	0.213	0.213	ng/L	
Hg2700-1	RN	SAM	1611249-06	1	12/7/16 3:47	18718-1.RAW	3:47:48	150.20		1		150.2	0.240	0.240	ng/L	
Hg2700-1	RN	SAM	1611249-07	1	12/7/16 3:58	18719-1.RAW	3:58:19	480.60		1		480.6	0.801	0.801	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV2	1	12/7/16 4:08	18720-1.RAW	4:08:50	254.24				254.2	0.432	0.432	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB2	1	12/7/16 4:19	18721-1.RAW	4:19:20	6.48				6.5	0.011	0.011	ng/L	
Hg2700-1	RN	SAM	1611249-08	1	12/7/16 4:29	18722-1.RAW	4:29:51	553.87		1		553.9	0.926	0.926	ng/L	
Hg2700-1	RN	SAM	1611249-09	1	12/7/16 4:40	18723-1.RAW	4:40:22	422.41		1		422.4	0.702	0.702	ng/L	
Hg2700-1	RN	SAM	1611323-01	1	12/7/16 4:50	18724-1.RAW	4:50:53	1918.87		1		1918.9	3.248	3.248	ng/L	
Hg2700-1	RN	SAM	1611323-02	1	12/7/16 5:01	18725-1.RAW	5:01:23	2201.87		1		2201.9	3.729	3.729	ng/L	
Hg2700-1	RN	SAM	1611323-03	1	12/7/16 5:11	18726-1.RAW	5:11:54	4764.38		1		4764.4	8.087	8.087	ng/L	
Hg2700-1	RN	SAM	1611323-04	1	12/7/16 5:22	18727-1.RAW	5:22:25	2714.66		1		2714.7	4.601	4.601	ng/L	
Hg2700-1	RN	SAM	1611323-05	1	12/7/16 5:32	18728-1.RAW	5:32:55	211.04		1		211.0	0.343	0.343	ng/L	
Hg2700-1	RN	SAM	1611323-06	1	12/7/16 5:43	18729-1.RAW	5:43:26	3860.36		1		3860.4	6.550	6.550	ng/L	
Hg2700-1	RN	SAM	1611323-07	1	12/7/16 5:53	18730-1.RAW	5:53:57	52.12		1		52.1	0.073	0.073	ng/L	
Hg2700-1	RN	SAM	1611323-08	1	12/7/16 6:04	18731-1.RAW	6:04:28	2459.60		1		2459.6	4.167	4.167	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV3	1	12/7/16 6:14	18732-1.RAW	6:14:58	291.25				291.2	0.495	0.495	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB3	1	12/7/16 6:25	18733-1.RAW	6:25:29	13.33				13.3	0.023	0.023	ng/L	
Hg2700-1	RN	SAM	F612292-DUP1	1	12/7/16 6:36	18734-1.RAW	6:36:00	580.96		1		581.0	0.972	0.972	ng/L	
Hg2700-1	RN	SAM	F612292-MS1	10	12/7/16 6:46	18735-1.RAW	6:46:31	533.08		1		533.1	0.905	0.905	ng/L	



Instrument	Analyst	Sample Type	LabNumber	Dilution	Analyzed	FileID	Run End	Uncorrected Response	Batch ID	No PB Correction?	RESP	InitialResult	FinalResult	InitialUnits	Comments
Hg2700-1	RN	SAM	F612292-MSD1	10	12/7/16 6:57	18736-1.RAW	6:57:01	541.87	1		541.9	0.920	9.200	ng/L	
Hg2700-1	RN	SAM	F612292-MS2	10	12/7/16 7:07	18737-1.RAW	7:07:31	797.12	1		797.1	1.354	13.542	ng/L	
Hg2700-1	RN	SAM	F612292-MSD2	10	12/7/16 7:18	18738-1.RAW	7:18:01	723.86	1		723.9	1.230	12.296	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV4	1	12/7/16 7:28	18739-1.RAW	7:28:32	287.47			287.5	0.489	0.489	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB4	1	12/7/16 7:39	18740-1.RAW	7:39:02	8.42			8.4	0.014	0.014	ng/L	

MethylMercury  
EPA1630

Operat RN  
Workst MMHg2  
Methoe 2010-01 R:  
Descrip MMHg27001-161206-3

BlankSub:  
CalibFactor:  
R:  
Blank

Calib Eqn:  
Status: Calblank error: Zero Pe  
R²:

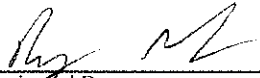
Run Date: 12/6/2016  
Run Time: 0:00:00  
CalibAnalyte:  
CF RSD%:

Blank SD:  
Blank RSD%:  
CF SD:  
CF RSD%:

Sample/ID	Location	Rinse	Dilute	Blank	ConcHg0(p)	ConcMeHg	ConcHg2(p)	ConcPrHg(c)	Rec%	QA	RawData	RunEnd	PeakHg0	Raw PeakMeHg (R)	PeakHg2(Raw)	PeakPrHg(Rai)	Control (etf)	Flags	RunCount
Clean											18688-1.RAW	22:32:21	0.00	0.58	4.32	0.00	cleandry	CT	1
ws	A1										18689-1.RAW	22:42:53	19.68	0.00	0.82	0.00	psample10	OK	1
SEQ-IBL1	A2		1								18690-1.RAW	22:53:24	28.77	0.00	15.38	0.00	psample10	OK	1
SEQ-CAL1	A3		1								18691-1.RAW	23:03:55	43.82	24.12	37.33	0.00	psample10	OK	1
SEQ-CAL2	A4		1								18692-1.RAW	23:14:26	43.87	118.64	36.02	0.00	psample10	OK	1
SEQ-CAL3	A5		1								18693-1.RAW	23:24:57	81.79	592.84	95.64	0.00	psample10	OK	1
SEQ-CAL4	A6		1								18694-1.RAW	23:35:27	106.30	1206.54	176.43	0.00	psample10	OK	1
SEQ-CAL5	A7		1								18695-1.RAW	23:45:58	196.05	2672.37	359.50	0.00	psample10	CT	1
SEQ-ICV1	A8		1								18696-1.RAW	23:56:29	69.53	287.65	73.79	0.00	psample10	OK	1
SEQ-ICB1	A9		1								18697-1.RAW	0:07:00	33.84	8.18	21.26	0.00	psample10	OK	1
F612262-BLK4	A10		1								18698-1.RAW	0:17:31	28.73	11.57	25.34	0.00	psample10	OK	1
F612262-BLK5	A11		1								18699-1.RAW	0:28:02	24.06	9.66	28.17	0.00	psample10	OK	1
F612262-BLK6	A12		1								18700-1.RAW	0:38:33	23.98	9.82	22.08	0.00	psample10	OK	1
1611242-04RE1	A13		5								18701-1.RAW	0:49:03	101.00	579.89	753.81	0.00	psample10	CT	1
1611242-11RE1	A14		5								18702-1.RAW	0:59:34	110.84	153.57	920.02	0.00	psample10	CT	1
F612292-BLK1	A15		1								18703-1.RAW	1:10:05	31.63	9.66	75.29	0.00	psample10	OK	1
F612292-BLK2	A16		1								18704-1.RAW	1:20:36	32.13	7.35	119.72	0.00	psample10	OK	1
F612292-BLK3	A17		1								18705-1.RAW	1:31:06	24.09	8.22	58.72	0.00	psample10	OK	1
F612292-B51	A18		10								18706-1.RAW	1:41:37	36.95	455.58	23.47	0.00	psample10	CT	1
F612292-BSD1	A19		10								18707-1.RAW	1:52:08	35.87	461.99	21.98	0.00	psample10	CT	1
SEQ-CCV1	A20		1								18708-1.RAW	2:02:39	63.91	263.57	73.07	0.00	psample10	OK	1
SEQ-CCB1	A21		1								18709-1.RAW	2:13:09	22.60	5.32	20.81	0.00	psample10	OK	1
1611242-12	B1		1								18710-1.RAW	2:23:40	61.84	504.22	537.01	0.00	psample10	CT	1
1611242-13	B2		1								18711-1.RAW	2:34:11	54.60	411.69	333.67	0.00	psample10	CT	1
1611242-14	B3		1								18712-1.RAW	2:44:42	34.54	213.48	126.61	0.00	psample10	CT	1
1611249-01	B4		1								18713-1.RAW	2:55:12	47.19	348.82	297.66	0.00	psample10	OK	1
1611249-02	B5		1								18714-1.RAW	3:05:45	26.19	269.21	49.80	0.00	psample10	OK	1
1611249-03	B6		1								18715-1.RAW	3:16:16	43.21	593.48	191.01	0.00	psample10	CT	1
1611249-04	B7		1								18716-1.RAW	3:26:47	80.35	162.39	792.56	0.00	psample10	CT	1
1611249-05	B8		1								18717-1.RAW	3:37:17	48.98	134.80	322.87	0.00	psample10	OK	1
1611249-06	B9		1								18718-1.RAW	3:47:48	28.66	150.20	70.07	0.00	psample10	OK	1
1611249-07	B10		1								18719-1.RAW	3:58:19	71.76	480.60	610.94	0.00	psample10	CT	1
SEQ-CCV2	B11		1								18720-1.RAW	4:08:50	62.16	254.24	72.11	0.00	psample10	CT	1
SEQ-CCB2	B12		1								18721-1.RAW	4:19:20	25.81	6.48	18.40	0.00	psample10	OK	1
1611249-08	B13		1								18722-1.RAW	4:29:51	41.19	553.87	220.33	0.00	psample10	CT	1
1611249-09	B14		1								18723-1.RAW	4:40:22	35.97	422.41	118.10	0.00	psample10	OK	1
1611323-01	B15		1								18724-1.RAW	4:50:53	65.18	1918.87	148.96	0.00	psample10	CT	1
1611323-02	B16		1								18725-1.RAW	5:01:23	55.82	2201.87	32.21	0.00	psample10	CT	1
1611323-03	B17		1								18726-1.RAW	5:11:54	95.06	4764.38	29.46	0.00	psample10	CT	1
1611323-04	B18		1								18727-1.RAW	5:22:25	77.26	2714.66	39.29	0.00	psample10	CT	1
1611323-05	B19		1								18728-1.RAW	5:32:55	37.11	211.04	117.50	0.00	psample10	OK	1
1611323-06	B20		1								18729-1.RAW	5:43:26	90.10	3860.36	114.54	0.00	psample10	CT	1
1611323-07	B21		1								18730-1.RAW	5:53:57	23.73	52.12	10.91	0.00	psample10	OK	1
1611323-08	C1		1								18731-1.RAW	6:04:28	67.05	2459.60	41.72	0.00	psample10	OK	1
SEQ-CCV3	C2		1								18732-1.RAW	6:14:58	54.11	291.25	79.31	0.00	psample10	OK	1
SEQ-CCB3	C3		1								18733-1.RAW	6:25:29	20.73	13.33	19.16	0.00	psample10	OK	1
F612292-DUP1	C4		1								18734-1.RAW	6:36:00	42.61	580.96	318.39	0.00	psample10	CT	1
F612292-MS1	C5		10								18735-1.RAW	6:46:31	32.19	533.08	33.94	0.00	psample10	CT	1
F612292-MSD1	C6		10								18736-1.RAW	6:57:01	33.16	541.87	57.06	0.00	psample10	OK	1
F612292-MS2	C7		10								18737-1.RAW	7:07:31	46.76	797.12	33.26	0.00	psample10	CT	1
F612292-MSD2	C8		10								18738-1.RAW	7:18:01	36.94	723.86	22.89	0.00	psample10	CT	1
SEQ-CCV4	C9		1								18739-1.RAW	7:28:32	50.15	287.47	83.79	0.00	psample10	OK	1
SEQ-CCB4	C10		1								18740-1.RAW	7:39:02	19.68	8.42	13.77	0.00	psample10	CT	1

# Failing Data Report - 6L07016

Sample ID	Analysis	Result	MRL	Dup Result	Source Result	True Value	Units	% Rec.	Rec. LCL	Rec. UCL	RPD	RPD Limit	Over Cal	Failure	Qualifier
1611323-03	MHg-CVAFS-S-MeClExt	10.4	0.129				ng/g						FAIL-OVER	PASS	E
1611323-04	MHg-CVAFS-S-MeClExt	4.68	0.102				ng/g						FAIL-OVER	PASS	E
1611323-06	MHg-CVAFS-S-MeClExt	10.1	0.155				ng/g						FAIL-OVER	PASS	E
1611323-08	MHg-CVAFS-S-MeClExt	3.17	0.077				ng/g						FAIL-OVER	PASS	E


  
 Analyst Reviewed By \_\_\_\_\_ Date 12/7/11

Peer Reviewed By \_\_\_\_\_ Date \_\_\_\_\_

## ANALYSIS SEQUENCE

6L07016

Instrument: Hg2700-1

Calibration ID: UNASSIGNED

Analyzed: 12/6/2016

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
6L07016-IBL1	QC	1			
6L07016-CAL1	QC	2	1606090		
6L07016-CAL2	QC	3	1606091		
6L07016-CAL3	QC	4	1606092		
6L07016-CAL4	QC	5	1606093		
6L07016-CAL5	QC	6	1606094		
6L07016-ICV1	QC	7	1607014		
6L07016-ICB1	QC	8			
F612262-BLK4	QC	9			
F612262-BLK5	QC	10			
F612262-BLK6	QC	11			
1611242-04RE1	MHg-CVAFS-S-MeClExt	12			Added 12/5/2016 by RN
1611242-11RE1	MHg-CVAFS-S-MeClExt	13			Added 12/5/2016 by RN
F612292-BLK1	QC	14			
F612292-BLK2	QC	15			
F612292-BLK3	QC	16			
F612292-BS1	QC	17			
F612292-BSD1	QC	18			
6L07016-CCV1	QC	19	1607014		
6L07016-CCB1	QC	20			
1611242-12	MHg-CVAFS-S-MeClExt	21			Scan all data for Level IV
1611242-13	MHg-CVAFS-S-MeClExt	22			Scan all data for Level IV
1611242-14	MHg-CVAFS-S-MeClExt	23			Scan all data for Level IV
1611249-01	MHg-CVAFS-S-MeClExt	24			Scan all data for Level IV
1611249-02	MHg-CVAFS-S-MeClExt	25			Scan all data for Level IV
1611249-03	MHg-CVAFS-S-MeClExt	26			Scan all data for Level IV
1611249-04	MHg-CVAFS-S-MeClExt	27			Scan all data for Level IV
1611249-05	MHg-CVAFS-S-MeClExt	28			Scan all data for Level IV
1611249-06	MHg-CVAFS-S-MeClExt	29			Scan all data for Level IV
1611249-07	MHg-CVAFS-S-MeClExt	30			Scan all data for Level IV
6L07016-CCV2	QC	31	1607014		
6L07016-CCB2	QC	32			
1611249-08	MHg-CVAFS-S-MeClExt	33			Scan all data for Level IV
1611249-09	MHg-CVAFS-S-MeClExt	34			Scan all data for Level IV
1611323-01	MHg-CVAFS-S-MeClExt	35			

Due Date: 12/8/2016

**ANALYSIS SEQUENCE**

**6L07016**

**Instrument: Hg2700-1**


**Calibration ID: UNASSIGNED**

**Analyzed: 12/6/2016**

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
1611323-02	MHg-CVAFS-S-MeClExt	36			
1611323-03	MHg-CVAFS-S-MeClExt	37			
1611323-04	MHg-CVAFS-S-MeClExt	38			
1611323-05	MHg-CVAFS-S-MeClExt	39			
1611323-06	MHg-CVAFS-S-MeClExt	40			
1611323-07	MHg-CVAFS-S-MeClExt	41			
1611323-08	MHg-CVAFS-S-MeClExt	42			
6L07016-CCV3	QC	43	1607014		
6L07016-CCB3	QC	44			
F612292-DUP1	QC	45			
F612292-MS1	QC	46			
F612292-MSD1	QC	47			
F612292-MS2	QC	48			
F612292-MSD2	QC	49			
6L07016-CCV4	QC	50	1607014		
6L07016-CCB4	QC	51			


  
 Samples Loaded By \_\_\_\_\_ Date 12/6/16


  
 Data Processed By \_\_\_\_\_ Date 12/7/16


  
12/7/16

**Due Date: 12/8/2016**

**PREPARATION BENCH SHEET**

F612262

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/5/2016**

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612262-BLK1	Blank	0.5	250					
F612262-BLK2	Blank	0.5	250					
F612262-BLK3	Blank	0.5	250					
F612262-BLK4	Blank	0.5	250					
F612262-BLK5	Blank	0.5	250					
F612262-BLK6	Blank	0.5	250					
F612262-BS1	Blank Spike	0.5	250	1605978	25			
F612262-BSD1	Blank Spike dup	0.5	250	1605978	25			
F612262-DUP1	Duplicate [1611241-01]	0.5402	250					
F612262-MS1	Matrix Spike [1611241-01]	0.5362	250	1605978	25			
F612262-MS2	Matrix Spike [1611242-04]	0.5297	250	1605978	25			
F612262-MSD1	Matrix Spike Dup [1611241-01]	0.5378	250	1605978	25			
F612262-MSD2	Matrix Spike Dup [1611242-04]	0.5382	250	1605978	25			

<u>Standard ID(s):</u> 1605978	<u>Description:</u> MHg New Primary 100 ng/mL spike	<u>Expiration:</u> 15-Oct-17 00:00	<u>Reagent ID(s):</u> 1602383 1603399 1605961 1606301 1606577 1606841 1607015	<u>Description:</u> Sodium Borohydride, 98% Boiling Chips for AFS prep Acetate Buffer Ethylating Agent (For Methyl Mercury Analysis) CuSO4 Ethylating Agent (For Methyl Mercury Analysis) Acid Bromide	<u>Expiration:</u> 05-May-19 00:00 01-Jun-17 00:00 11-Apr-17 00:00 26-Apr-17 00:00 02-Feb-17 00:00 22-May-17 00:00 01-Jan-17 00:00
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**PREPARATION BENCH SHEET**

F612262

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/5/2016**

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611150-03	NB03SED-CHM315D 8675648	0.518	250	-	-	-	Scan all data for Level IV	
1611150-04	NB03SED-CHM321 8675651	0.5168	250	-	-	-	Scan all data for Level IV	
1611150-05	NB03SED-CHM325 8675653	0.5413	250	-	-	-	Scan all data for Level IV	
1611239-01	NB03SED-CHM344	0.5673	250	-	-	-	Preservation Blank Created Scan all dat	
1611239-02	NB03SED-CHM354	0.5451	250	-	-	-	Preservation Blank Created Scan all dat	
1611239-03	NB03SED-CHM350	0.5218	250	-	-	-	Preservation Blank Created Scan all dat	
1611241-01	NB03SED-CHM331 8680687	0.5405	250	-	-	-	Preservation Blank Created Scan all dat	
1611241-02	NB03SED-CHM382 8680689	0.5553	250	-	-	-	Preservation Blank Created Scan all dat	
1611241-03	NB03SED-CHM329 8680691	0.5639	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-01	NB03SED-CHM338 8678426	0.5541	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-02	NB03SED-CHM349 8678428	0.538	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-03	NB03SEDDUP-10 8678430	0.5859	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-04	NB03SED-CHM339 8678434	0.5522	250	QC	-	-	MS/MSD Scan all data for Level IV	
1611242-04RE1	NB03SED-CHM339 8678434	0.5522	250	QC	-	-	MS/MSD Added 12/5/2016 by RN	Added 12/5/2016 by RN
1611242-05	NB03SED-CHM339 DUP 8678437	0.5378	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-06	NB03SED-CHM345 8678439	0.5667	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-07	NB03SED-CHM340 8678441	0.5368	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-08	NB03SED-CHM335 8678443	0.582	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-09	NB03SED-CHM336 8678445	0.5593	250	-	-	-	Preservation Blank Created Scan all dat	

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Date: 12/6/2016

PREPARATION BENCH SHEET

F612262

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg

Prepared: 12/5/2016

1611242-10	NB03SED-CHM337 8678447	0.5403	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-11	NB03SED-CHM330 8678449	0.5413	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-11RE1	NB03SED-CHM330 8678449	0.5413	250	-	-	-	Preservation Blank Created Added 12/5	Added 12/5/2016 by RN





**PREPARATION BENCH SHEET**

F612292

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/5/2016**

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612292-BLK1	Blank	0.5	250					
F612292-BLK2	Blank	0.5	250					
F612292-BLK3	Blank	0.5	250					
F612292-BS1	Blank Spike	0.5	250	1605978	25			
F612292-BSD1	Blank Spike Dup	0.5	250	1605978	25			
F612292-DUP1	Duplicate [1611249-07]	0.5618	250					
F612292-MS1	Matrix Spike [1611249-07]	0.564	250	1605978	25			
F612292-MS2	Matrix Spike [1611323-01]	0.5451	250	1605978	25			
F612292-MSD1	Matrix Spike Dup [1611249-07]	0.5688	250	1605978	25			
F612292-MSD2	Matrix Spike Dup [1611323-01]	0.5488	250	1605978	25			

Standard ID(s): 1605978  
Description: MHg New Primary 100 ng/mL spike

Expiration: 15-Oct-17 00:00

<u>Reagent ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>
1602382	Dichloromethane	05-May-19 00:00
1603399	Boiling Chips for AFS prep	01-Jun-17 00:00
1605961	Acetate Buffer	11-Apr-17 00:00
1606841	Ethylating Agent (For Methyl Mercury Analysis)	22-May-17 00:00
1607015	Acid Bromide	01-Jan-17 00:00
1607016	CuSO4	30-May-17 00:00

**PREPARATION BENCH SHEET**

F612292

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/5/2016**

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-12	NB03SED-CHM333 8678451	0.5824	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-13	NB03SED-CHM334 8678453	0.5328	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-14	NB03SED-CHM390 8678455	0.5578	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-01	NB03SED-CHM332 8680694	0.5424	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-02	NB03SED-CHM381 8680696	0.5554	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-03	NB03SED-CHM328 8680698	0.5611	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-04	NB03SED-CHM327 8680700	0.5525	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-05	NB03SEDDUP-11 8680702	0.576	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-06	NB03SED-CHM380 8680704	0.5406	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-07	NB03SED-CHM326 8680708	0.5781	250	QC	-	-	MS/MSD Scan all data for Level IV	
1611249-08	NB03SED-CHM326 DUP 8680711	0.5631	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-09	NB03SED-CHM341 8680713	0.5622	250	-	-	-	Preservation Blank Created Scan all dat	
1611323-01	W-61-HIGH_110816_SED_03	0.5412	250	-	-	-		
1611323-02	W-61-INT_110816_SED_03	0.5872	250	-	-	-		
1611323-03	W-61-LOW_110816_SED_03	0.5548	250	-	-	-		
1611323-04	W-61-MID_110816_SED_03	0.5893	250	-	-	-		
1611323-05	W-63-HIGH_110816_SED_03	0.5396	250	-	-	-		
1611323-06	W-63-INT_110816_SED_03	0.5442	250	-	-	-		
1611323-07	W-63-LOW_110816_SED_03	0.5826	250	-	-	-		

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Date: 12/8/2016

PREPARATION BENCH SHEET

F612292

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg

Prepared: 12/5/2016

1611323-08	W-63-MID_110816_SED_03	0.5904	250	-	-	-		
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**PREPARATION BENCH SHEET**

F612262

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/2/2016**

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612262-BLK1	Blank	0.5	250					
F612262-BLK2	Blank	0.5	250					
F612262-BLK3	Blank	0.5	250					
<del>F612262-BLK4</del>	Blank	0.5	250					
<del>F612262-BLK5</del>	Blank	0.5	250					12
<del>F612262-BLK6</del>	Blank	0.5	250					12
F612262-BS1	Blank Spike	0.5	250	1605978	25			12
F612262-BSD1	Blank Spike dup	0.5	250	1605978	25			
F612262-DUP1	Duplicate [1611241-01]	0.5402	250					
F612262-MS1	Matrix Spike [1611241-01]	0.5362	250	1605978	25			
F612262-MS2	Matrix Spike [1611242-04]	0.5297	250	1605978	25			
F612262-MSD1	Matrix Spike Dup [1611241-01]	0.5378	250	1605978	25			
F612262-MSD2	Matrix Spike Dup [1611242-04]	0.5382	250	1605978	25			

Standard ID(s): 1605978  
Description: MHg New Primary 100 ng/mL spike

Expiration: 15-Oct-17 00:00

Reagent ID(s): 1602383  
 1603399  
 1606577  
 1607015  
Description: Sodium Borohydride, 98%  
 Boiling Chips for AFS prep  
 CuSO4  
 Acid Bromide

Expiration: 05-May-19 00:00  
 01-Jun-17 00:00  
 02-Feb-17 00:00  
 01-Jan-17 00:00

1605961  
 1606891

**PREPARATION BENCH SHEET**

F612262

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/2/2016**

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611150-03	NB03SED-CHM315D 8675648	0.518	250	-	-	-	Scan all data for Level IV	
1611150-04	NB03SED-CHM321 8675651	0.5168	250	-	-	-	Scan all data for Level IV	
1611150-05	NB03SED-CHM325 8675653	0.5413	250	-	-	-	Scan all data for Level IV	
1611239-01	NB03SED-CHM344 8678419	0.5673	250	-	-	-	Preservation Blank Created Scan all dat	
1611239-02	NB03SED-CHM354 8678421	0.5451	250	-	-	-	Preservation Blank Created Scan all dat	
1611239-03	NB03SED-CHM350 8678423	0.5218	250	-	-	-	Preservation Blank Created Scan all dat	
1611241-01	NB03SED-CHM331 8680687	0.5405	250	-	-	-	Preservation Blank Created Scan all dat	
1611241-02	NB03SED-CHM382 8680689	0.5553	250	-	-	-	Preservation Blank Created Scan all dat	
1611241-03	NB03SED-CHM329 8680691	0.5639	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-01	NB03SED-CHM338 8678426	0.5541	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-02	NB03SED-CHM349 8678428	0.538	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-03	NB03SEDDUP-10 8678430	0.5859	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-04	NB03SED-CHM339 8678434	0.5522	250	QC	-	-	MS/MSD Scan all data for Level IV	
1611242-04RE1	NB03SED-CHM339 8678434	0.5522	250	QC	-	-	MS/MSD Added 12/5/2016 by RN	Added 12/5/2016 by RN <i>Sx</i>
1611242-05	NB03SED-CHM339 DUP 8678437	0.5378	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-06	NB03SED-CHM345 8678439	0.5667	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-07	NB03SED-CHM340 8678441	0.5368	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-08	NB03SED-CHM335 8678443	0.582	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-09	NB03SED-CHM336 8678445	0.5593	250	-	-	-	Preservation Blank Created Scan all dat	

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Date: 12/6/2016

**PREPARATION BENCH SHEET**

F612262

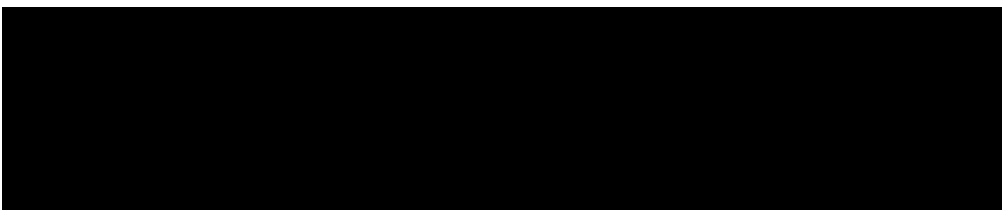
**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/2/2016**

1611242-10	NB03SED-CHM337 8678447	0.5403	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-11	NB03SED-CHM330 8678449	0.5413	250	-	-	-	Preservation Blank Created Scan all dat	
<del>1611242-11RE1</del>	NB03SED-CHM330 8678449	0.5413	250	-	-	-	Preservation Blank Created Added 12/5	Added 12/5/2016 by RN <i>Sx</i>



**Methyl Mercury Sediment Preparation : EFAPS-T-AFS-SOP5134**

Technician: Dugan Batch#: F612262 Date: 12-01-16

Heat Block 45°C (nitrogen purge for 30 minutes). Balance#: 19 Calibrated?  Yes  No

Date of purging:	Actual Temp (raw) °C	W/CF °C	Hot Block Unit # (10 or 11)	Date of purging: re purges	Actual Temp (raw) °C	W/CF °C	Hot Block Unit # (10 or 11)
12/2/16	48.7	48.0	10	12-5-16	48.3	47.6	11
1 <sup>st</sup> time in: 9:55	48.7	48.0	10	1 <sup>st</sup> time in: 13:00	48.3	47.6	11
1 <sup>st</sup> time out: 10:25	48.9	48.2	10	1 <sup>st</sup> time out: 13:30	48.8	48.1	11
2 <sup>nd</sup> time in: 10:30	49.0	48.3	11	2 <sup>nd</sup> time in:			
2 <sup>nd</sup> time out: 11:00	48.7	48.0	11	2 <sup>nd</sup> time out:			
3 <sup>rd</sup> time in: 11:05	48.1	47.8	10	3 <sup>rd</sup> time in:			
3 <sup>rd</sup> time out: 11:35	48.3	47.6	10	3 <sup>rd</sup> time out:			
4 <sup>th</sup> time in: 11:40	48.5	47.8	11	4 <sup>th</sup> time in:			
4 <sup>th</sup> time out: 12:00	48.3	47.6	11	4 <sup>th</sup> time out:			

Final vol.: 50 mL (LIMS ID: N/A) Spike vol.: 25 µL (LIMS ID: 1605978)

Spike Witness: Bc 12-2-16 (initial and date)

Acid Bromide LIMS ID: 1607015 Pipette SN#: CJ17087 Calibration Date: 11/28/16  
 CH<sub>2</sub>Cl<sub>2</sub> LIMS ID: 1602382 Pipette SN#: W224486 Calibration Date: 11/28/16  
 CuSO<sub>4</sub> LIMS ID: 1606577 Dispenser #: 12391647 Calibrated?  Yes  No  
 Other Acid LIMS ID: N/A Boiling Chip lot #: 1603399  
 Centrifuge Tube Lot #: J224177-11233

Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> g	Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> g	Comments
1	F612262 Blank1	0.5015	23	1611242-04A	0.5522	Thermometer SN:
2	F612262 Blank2	0.4982	24	1611242-05	0.5378	140418015
3	F612262 Blank3	0.5430	25	1611242-06	0.5667	Dupl MS/MS/MS
4	F612262 BS1	0.5152	26	1611242-07	0.5368	1611241-01
5	F612262 BS01	0.5308	27	1611242-08	0.5820	MS 2 MS 02
6	F612262 Dupl	0.5402	28	1611242-09	0.5593	1611242-04
7	F612262 MS1	0.5362	29	1611242-10	0.5403	weigh sample
8	F612262 MS1	0.5378	30	1611242-11	0.5413	on 12/1/16
9	F612262 MS2	0.5297	31			Add Acid
10	F612262 MS2	0.5382	32			on 12/2/16
11	1611150-03	0.5180	33			12/2/16 Purge
12	1611150-04	0.5168	34			ALL samples
13	1611150-05	0.5413	35			12/2/16
14	1611239-01	0.5673	36			Repurges on site
15	1611239-02	0.5451	37			Blank 4, 5, 6.
16	1611239-03	0.5218	38			1612242-0-4R2
17	1611241-01	0.5405	39			1612242-11R21
18	1611241-02	0.5553	40			12-5-16 DH
19	1611241-03	0.5639	41			
20	1611242-01	0.5541	42			
21	1611242-02	0.5380	43			
22	1611242-03	0.5859	44			

PREPARATION BENCH SHEET

29001 12/6/16

F612292

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg

Prepared: 12/5/2016

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612292-BLK1	Blank	0.5	250					1x
F612292-BLK2	Blank	0.5	250					1x
F612292-BLK3	Blank	0.5	250					1x
F612292-BS1	Blank Spike	0.5	250	1605978	25			10x
F612292-BSD1	Blank Spike Dup	0.5	250	1605978	25			10x
F612292-DUP1	Duplicate [1611249-07]	0.5618	250					1x
F612292-MS1	Matrix Spike [1611249-07]	0.564	250	1605978	25			10x
F612292-MS2	Matrix Spike [1611323-01]	0.5451	250	1605978	25			10x
F612292-MSD1	Matrix Spike Dup [1611249-07]	0.5688	250	1605978	25			10x
F612292-MSD2	Matrix Spike Dup [1611323-01]	0.5488	250	1605978	25			10x

Standard ID(s): 1605978  
 Description: MHg New Primary 100 ng/mL spike

Expiration: 15-Oct-17 00:00

Reagent ID(s): 1602382, 1603399, 1607015, 1607016  
 Description: Dichloromethane, Boiling Chips for AFS prep, Acid Bromide, CuSO4

Expiration: 05-May-19 00:00, 01-Jun-17 00:00, 01-Jan-17 00:00, 30-May-17 00:00

1605961

1606841



**PREPARATION BENCH SHEET**

F612292

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/5/2016**

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-12	NB03SED-CHM333 8678451	0.5824	250	-	-	-	Preservation Blank Created Scan all dat	12
1611242-13	NB03SED-CHM334 8678453	0.5328	250	-	-	-	Preservation Blank Created Scan all dat	12
1611242-14	NB03SED-CHM390 8678455	0.5578	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-01	NB03SED-CHM332 8680694	0.5424	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-02	NB03SED-CHM381 8680696	0.5554	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-03	NB03SED-CHM328 8680698	0.5611	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-04	NB03SED-CHM327 8680700	0.5525	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-05	NB03SEDDUP-11 8680702	0.576	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-06	NB03SED-CHM380 8680704	0.5406	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-07	NB03SED-CHM326 8680708	0.5781	250	QC	-	-	MS/MSD Scan all data for Level IV	12
1611249-08	NB03SED-CHM326 DUP 8680711	0.5631	250	-	-	-	Preservation Blank Created Scan all dat	12
1611249-09	NB03SED-CHM341 8680713	0.5622	250	-	-	-	Preservation Blank Created Scan all dat	12
1611323-01	W-61-HIGH_110816_SED_03	0.5412	250	-	-	-		12
1611323-02	W-61-INT_110816_SED_03	0.5872	250	-	-	-		12
1611323-03	W-61-LOW_110816_SED_03	0.5548	250	-	-	-		12
1611323-04	W-61-MID_110816_SED_03	0.5893	250	-	-	-		10
1611323-05	W-63-HIGH_110816_SED_03	0.5396	250	-	-	-		12
1611323-06	W-63-INT_110816_SED_03	0.5442	250	-	-	-		12
1611323-07	W-63-LOW_110816_SED_03	0.5826	250	-	-	-		12

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Date: 12/8/2016

PREPARATION BENCH SHEET

F612292

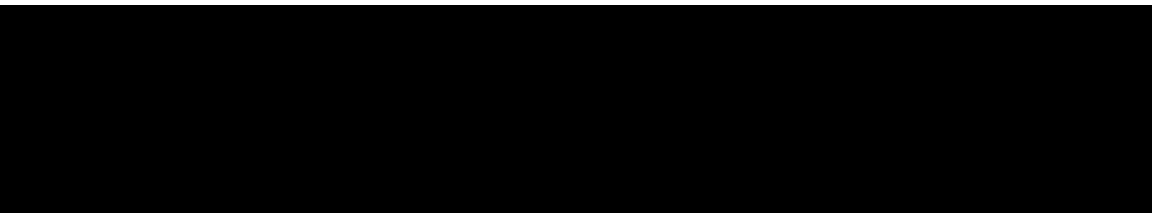
Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: Hg Aqmatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg

Prepared: 12/5/2016

1611323-08	W-63-MID_110816_SED_03	0.5904	250	-	-	-		/2
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**Methyl Mercury Sediment Preparation : EFAFS-T-AFS-SOP5134**

Technician: Duytan Batch#: F6/2292 Date: 12-2-16

Heat Block 45°C (nitrogen purge for 30 minutes). Balance#: 19 Calibrated?  Yes  No

Date of purging:	Actual Temp (raw) °C	W/CF °C	Hot Block Unit # (10 or 11)	Date of purging:	Actual Temp (raw) °C	W/CF °C	Hot Block Unit # (10 or 11)
12-05-16	48.5	47.8	11				
1 <sup>st</sup> time in: 10:40	48.5	47.8	11	1 <sup>st</sup> time in:			
1 <sup>st</sup> time out: 11:20	48.6	47.9	11	1 <sup>st</sup> time out:			
2 <sup>nd</sup> time in: 11:15	48.2	47.5	10	2 <sup>nd</sup> time in:			
2 <sup>nd</sup> time out: 11:45	48.4	47.7	10	2 <sup>nd</sup> time out:			
3 <sup>rd</sup> time in: 11:50	48.2	47.5	11	3 <sup>rd</sup> time in:			
3 <sup>rd</sup> time out: 12:20	48.8	48.1	11	3 <sup>rd</sup> time out:			
4 <sup>th</sup> time in: 12:28	48.5	47.8	10	4 <sup>th</sup> time in:			
4 <sup>th</sup> time out: 12:55	48.1	47.4	10	4 <sup>th</sup> time out:			

Final vol.: 50 mL (LIMS ID: N/A) Spike vol.: 25 µL (LIMS ID: 1605978)

Spike Witness: BC 12-5-16 (initial and date)

Acid Bromide LIMS ID: 1607015

CH<sub>2</sub>Cl<sub>2</sub> LIMS ID: 1602382

CuSO<sub>4</sub> LIMS ID: 1607016

Other Acid LIMS ID: N/A <sup>12-5-16</sup>

Centrifuge Tube Lot #: J224177-11273

Pipette SN#: CJ17087 Calibration Date: 12/5/16

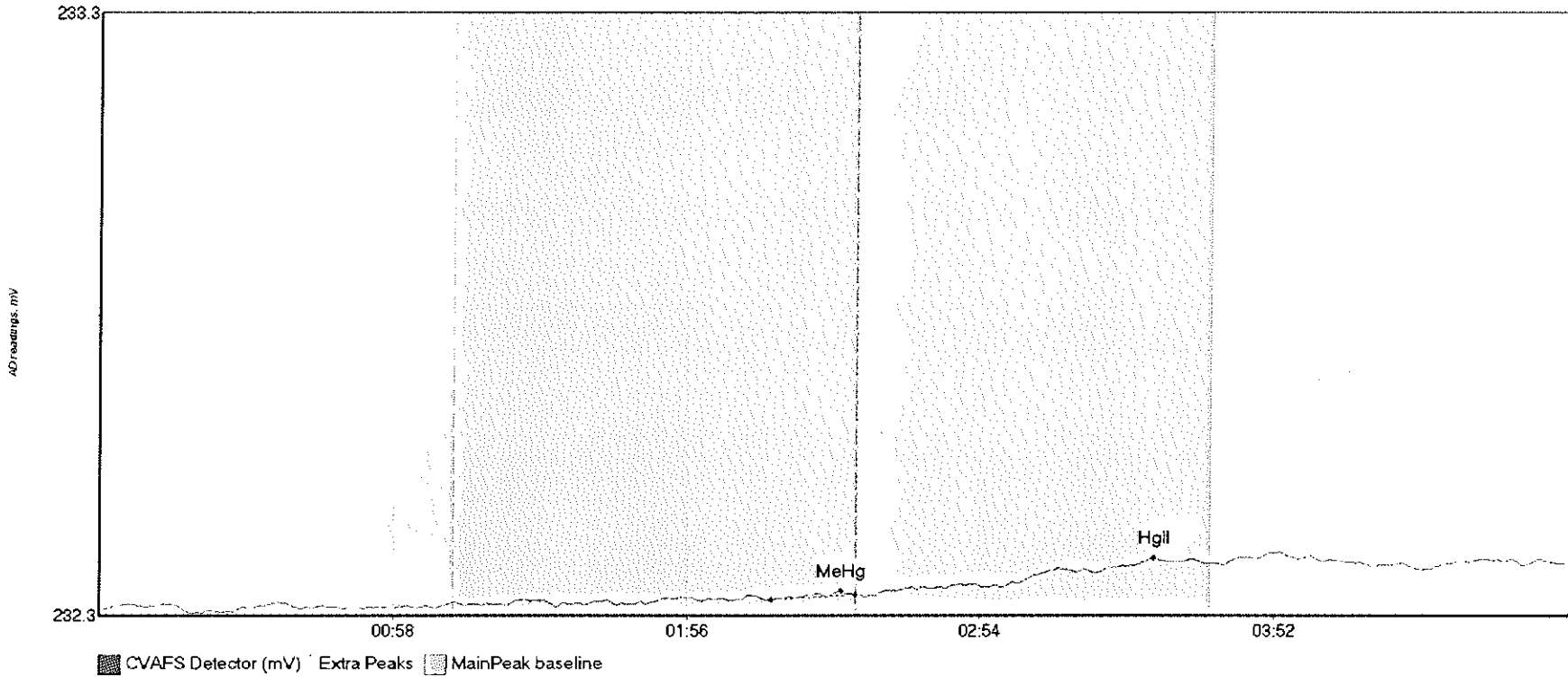
Pipette SN#: Lu24486 Calibration Date: 12/5/16

Dispenser #: 12J91647 Calibrated?  Yes  No

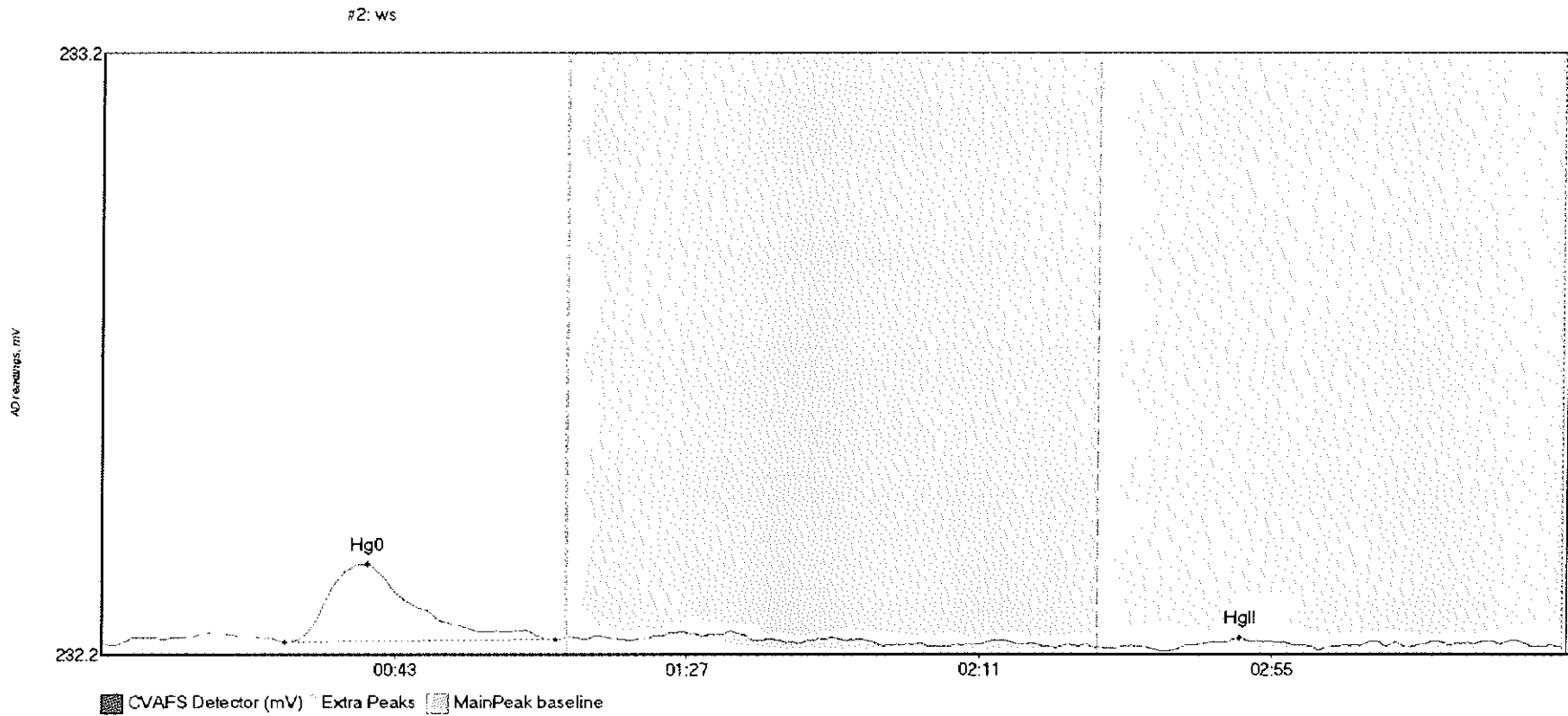
Boiling Chip lot #: 1603399

Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> g	Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> g	Comments
1	F612292 Blank1	0.5874	23	1611323-01	0.5412	Thermometer SN:
2	F612292 Blank2	0.5496	24	1611323-02	0.5872	140418015
3	F612292 Blank3	0.5013	25	1611323-03	0.5548	dupl MS/MS01
4	F612292 BS1	0.5462	26	1611323-04	0.5893	soln
5	F612292 MS01	0.5211	27	1611323-05	0.5396	1611249-07
6	F612292 dupl	0.5618	28	1611323-06	0.5442	MS2 MS02
7	F612292 MS1	0.5640	29	1611323-07	0.5826	1611323-01
8	F612292 MS01	0.5688	30	1611323-08	0.5904	weigh sample
9	F612292 MS2	0.5451	31			on 12-02-16
10	F612292 MS02	0.5488	32			Add Acid
11	1611242-12 <sup>12-2-16</sup>	0.5224	33			on 12/5/16
12	1611242-13	0.5328	34			12-2-16
13	1611242-14	0.5578	35			OK
14	1611249-01	0.5424	36			
15	1611249-02	0.5554	37			
16	1611249-03	0.5611	38			
17	1611249-04	0.5525	39			
18	1611249-05	0.5760	40			
19	1611249-06	0.5406	41			
20	1611249-07	0.5781	42			
21	1611249-08	0.5631	43			
22	1611249-09	0.5622	44			

#1: Clean

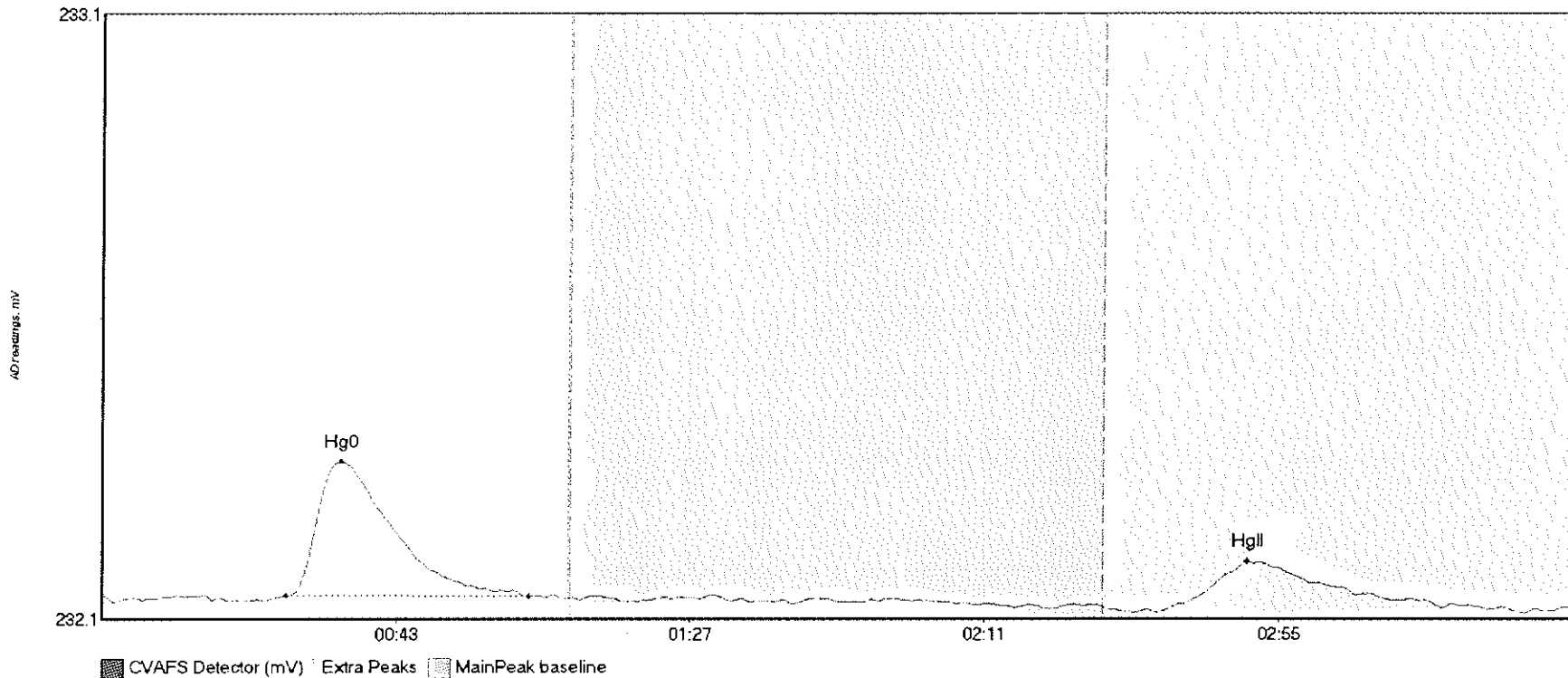


Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
Clean MeHg	0.577	133.2	150.0	232.31	232.31	147.0	0.015	CT	232.2937	0.00	0.07	
Clean HgII	4.324	153.8	219.6	232.31	232.37	209.1	0.063	OK	232.2937	0.00	0.07	



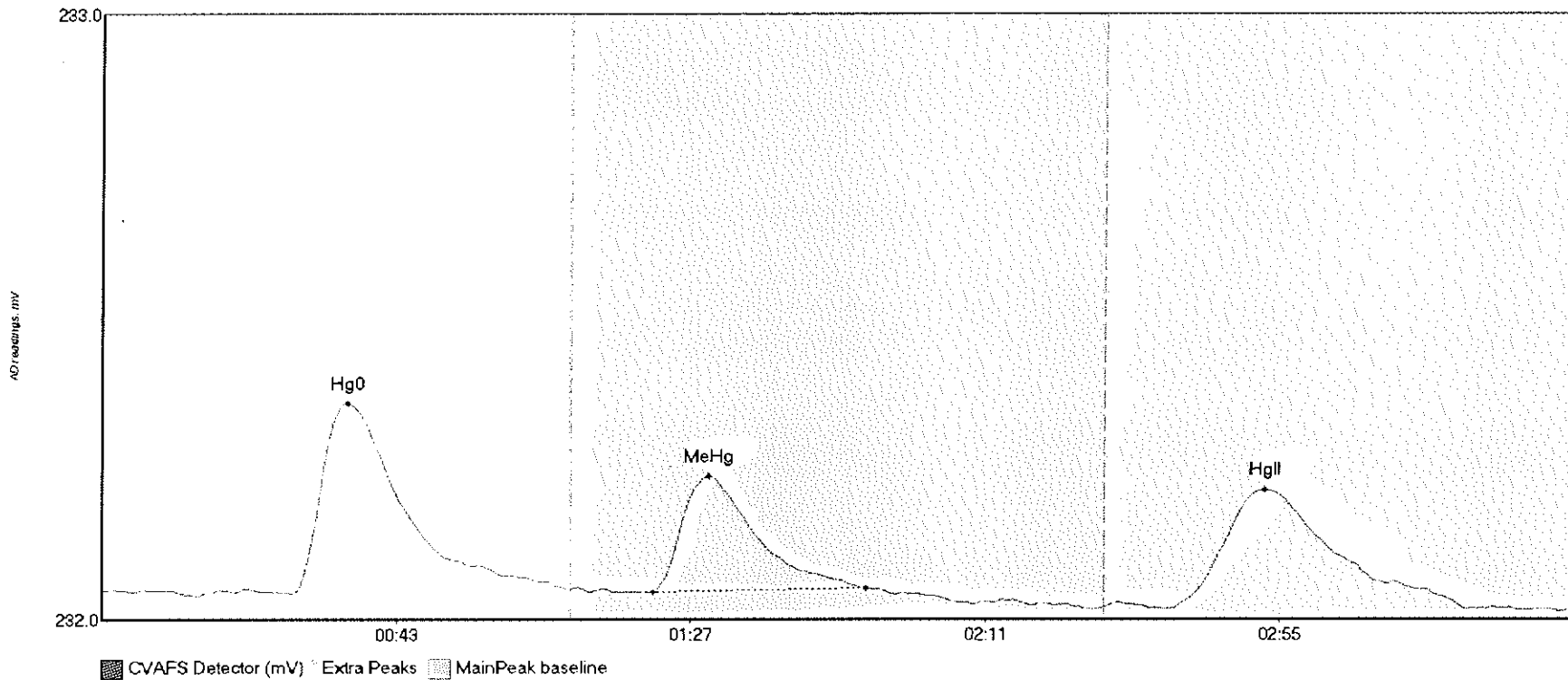
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
ws Hg0	19.684	27.6	68.3	232.20	232.20	39.8	0.132	OK	232.1939	0.00	0.00	
ws HgII	0.822	164.9	179.5	232.19	232.19	171.2	0.011	OK	232.1939	0.00	0.00	

#3: SEQ-IBL1



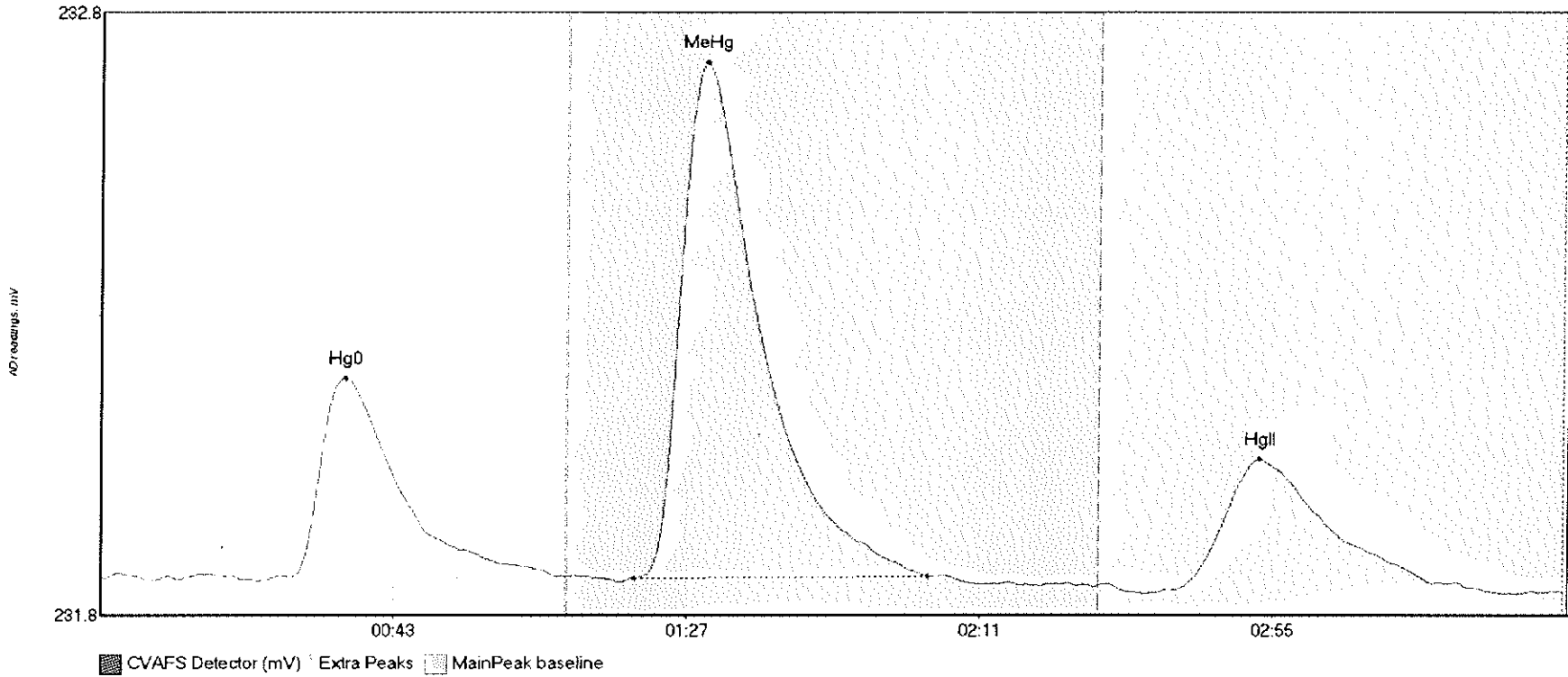
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-IBL1 Hg0	28.774	27.7	63.9	232.13	232.13	35.8	0.223	OK	232.1261	0.00	-0.02	
SEQ-IBL1 HgII	15.385	157.9	200.4	232.10	232.11	171.3	0.083	OK	232.1281	0.00	-0.02	

#4: SEQ-CAL1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL1 Hg0	43.825	28.4	69.6	232.02	232.02	36.7	0.315	OK	232.0200	0.00	-0.03	
SEQ-CAL1 MeHg	24.118	82.4	114.2	232.02	232.02	90.7	0.192	OK	232.0200	0.00	-0.03	
SEQ-CAL1 HgII	37.331	159.6	204.1	231.99	231.99	173.8	0.196	OK	232.0200	0.00	-0.03	

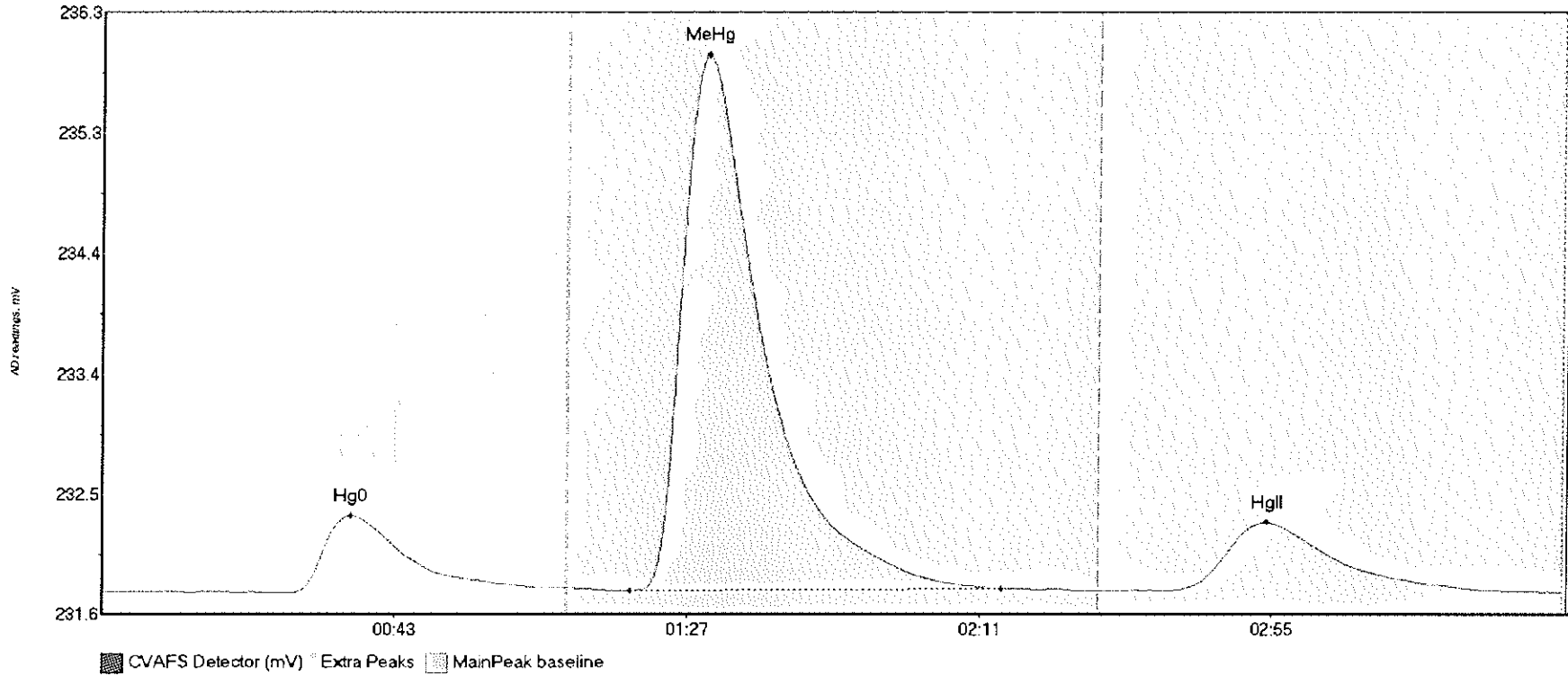
#5: SEQ-CAL2



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL2 Hg0	43.873	28.4	68.7	231.88	231.88	36.8	0.331	OK	231.8745	0.00	-0.02	
SEQ-CAL2 MeHg	118.643	80.1	124.3	231.87	231.88	90.9	0.855	OK	231.8745	0.00	-0.02	
SEQ-CAL2 HgII	36.023	161.3	200.0	231.86	231.87	174.0	0.217	OK	231.8745	0.00	-0.02	

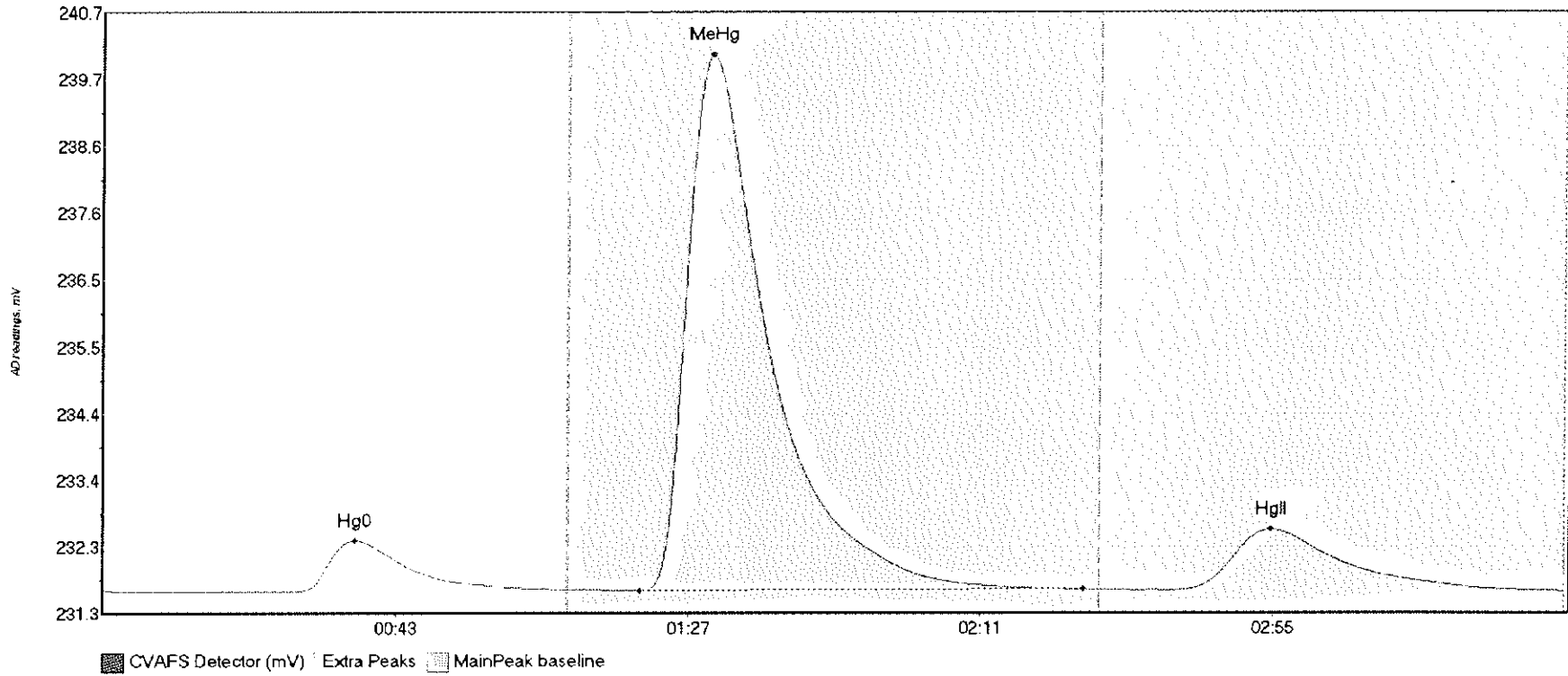


#6: SEQ-CAL3



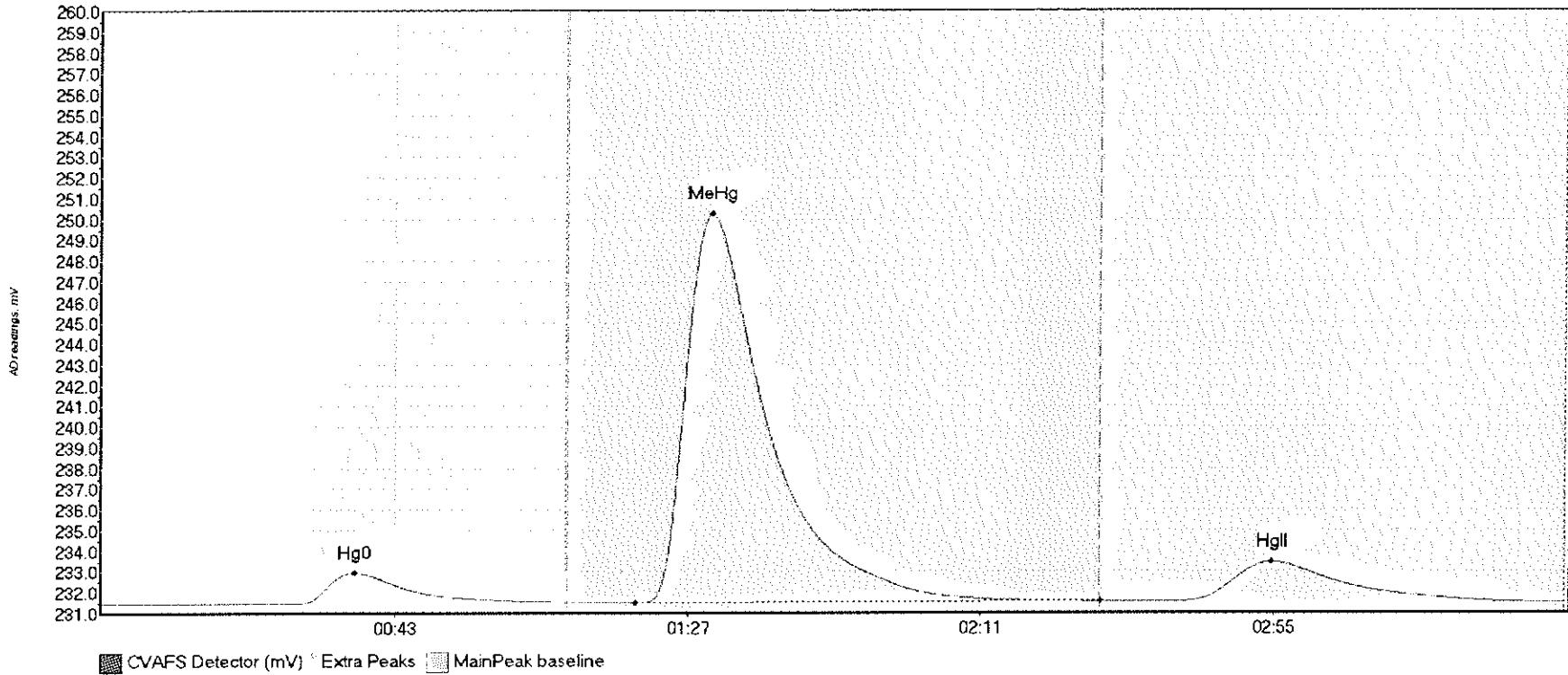
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL3 Hg0	81.789	28.5	67.1	231.73	231.76	37.5	0.599	OK	231.7346	0.00	-0.01	
SEQ-CAL3 MeHg	592.840	79.4	135.3	231.74	231.76	91.0	4.183	OK	231.7346	0.00	-0.01	
SEQ-CAL3 HgII	95.642	160.9	208.3	231.75	231.75	175.3	0.532	OK	231.7346	0.00	-0.01	

#7: SEQ-CAL4



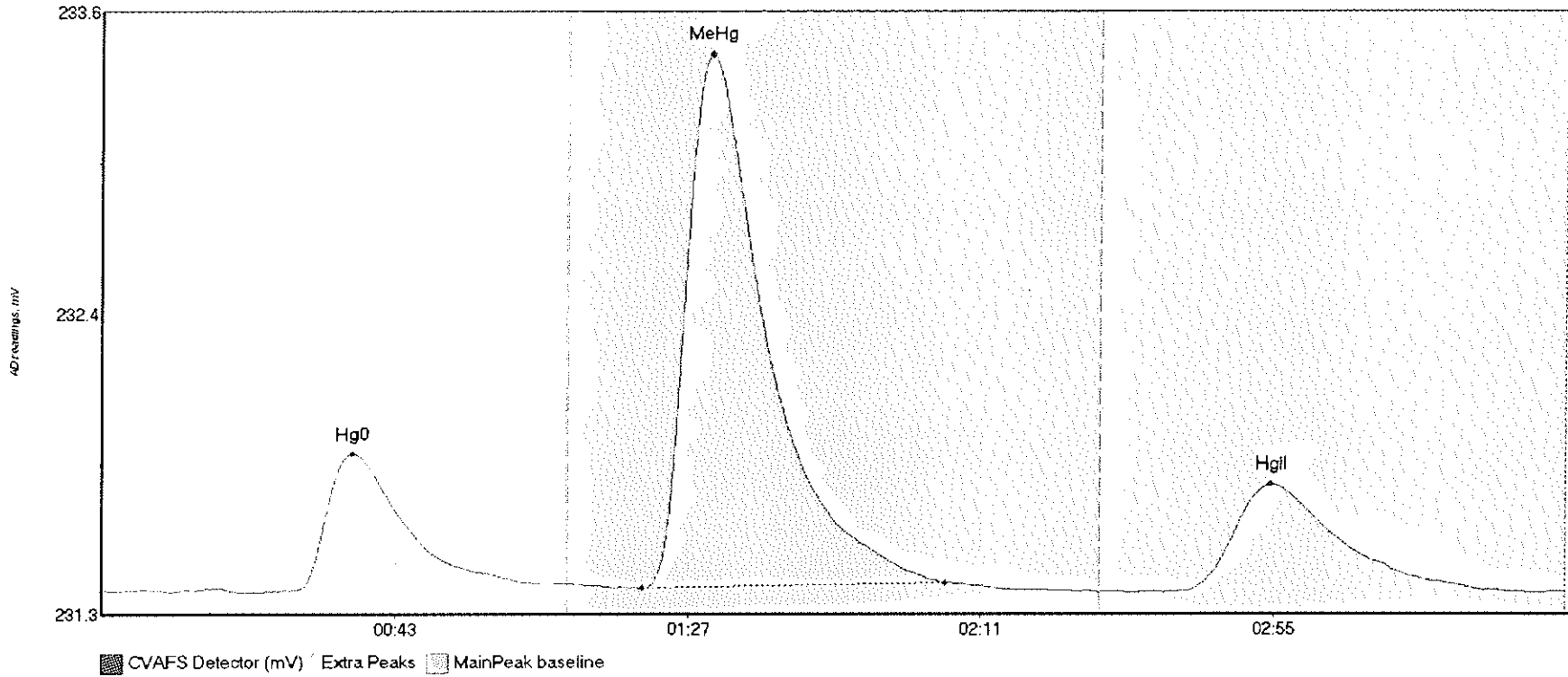
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL4 Hg0	106.301	28.6	69.8	231.60	231.63	37.9	0.804	OK	231.6133	0.00	0.00	
SEQ-CAL4 MeHg	1206.540	80.7	147.4	231.61	231.64	91.6	8.440	OK	231.6133	0.60	0.00	
SEQ-CAL4 HgII	176.430	160.1	212.0	231.62	231.63	175.7	0.960	OK	231.6133	0.00	0.00	

#8: SEQ-CAL5



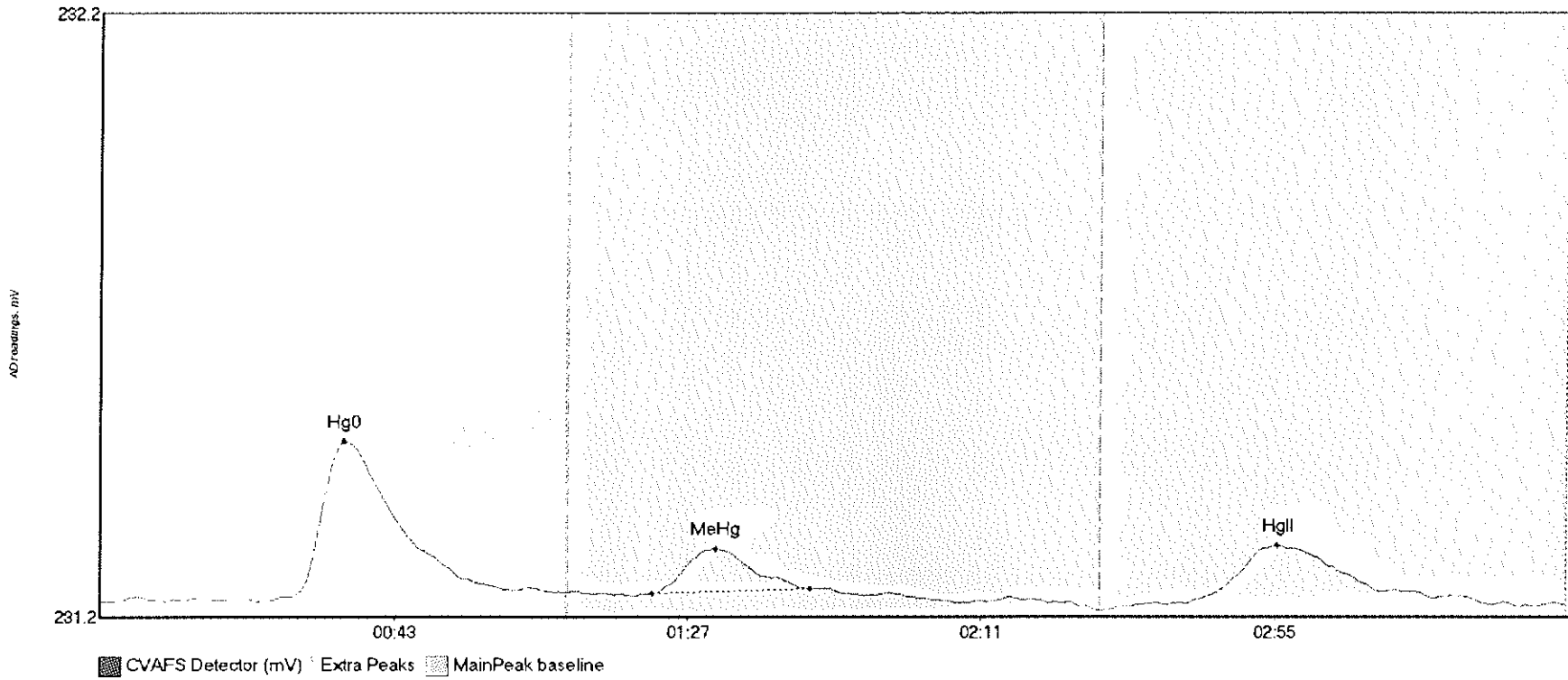
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL5 Hg0	196.052	27.7	68.5	231.45	231.52	38.0	1.491	OK	231.4610	0.00	0.06	
SEQ-CAL5 MeHg	2672.366	80.1	150.0	231.49	231.56	91.6	18.745	CT	231.4610	0.00	0.06	
SEQ-CAL5 HgII	359.504	161.2	215.9	231.55	231.52	175.7	1.907	OK	231.4610	0.00	0.06	

#9: SEQ-ICV1



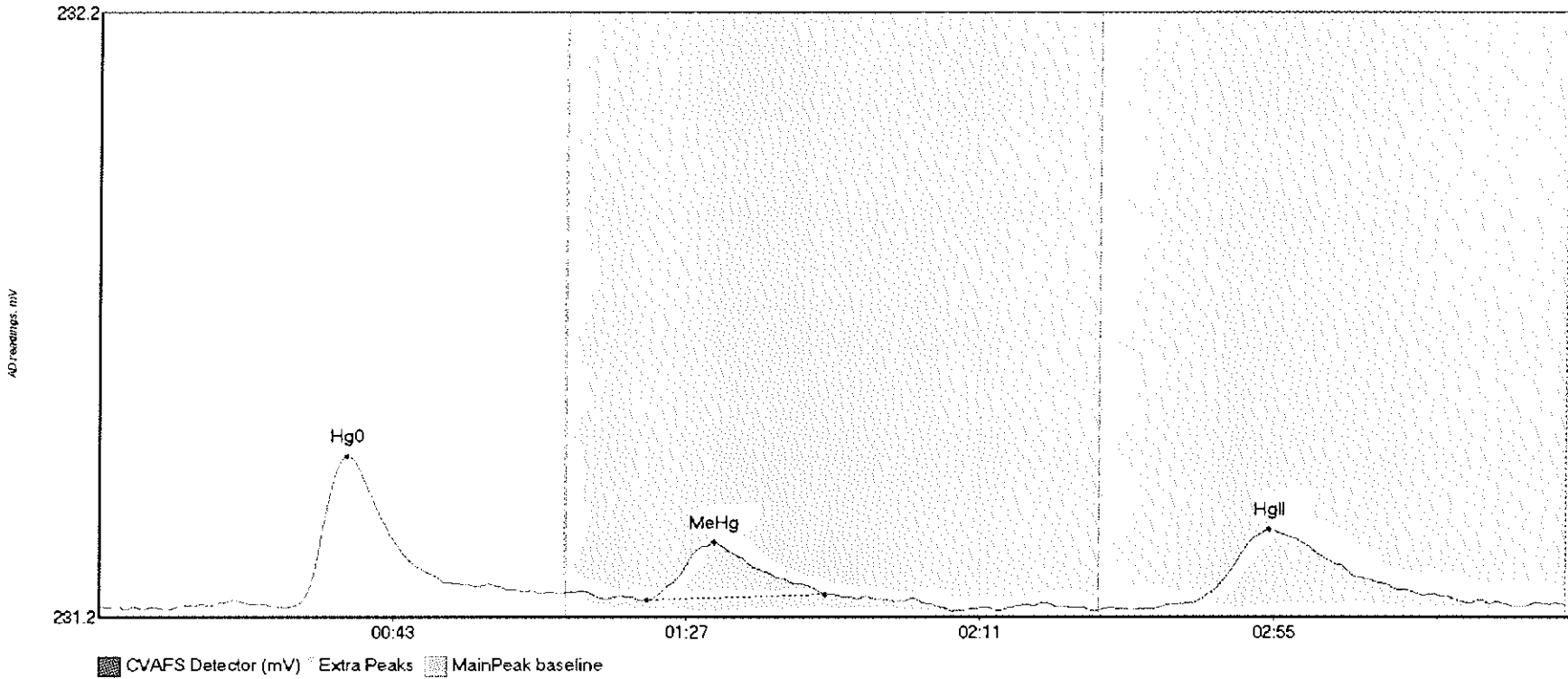
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	B1Dev	B1Shift	Comment
SEQ-ICV1 Hg0	69.532	28.5	67.3	231.35	231.37	37.6	0.528	OK	231.3500	0.00	0.00	
SEQ-ICV1 MeHg	287.647	81.2	126.7	231.36	231.38	91.4	2.060	OK	231.3500	0.00	0.00	
SEQ-ICV1 HgII	73.790	162.3	211.1	231.35	231.35	175.6	0.412	OK	231.3500	0.00	0.00	

#10: SEQ-ICB1



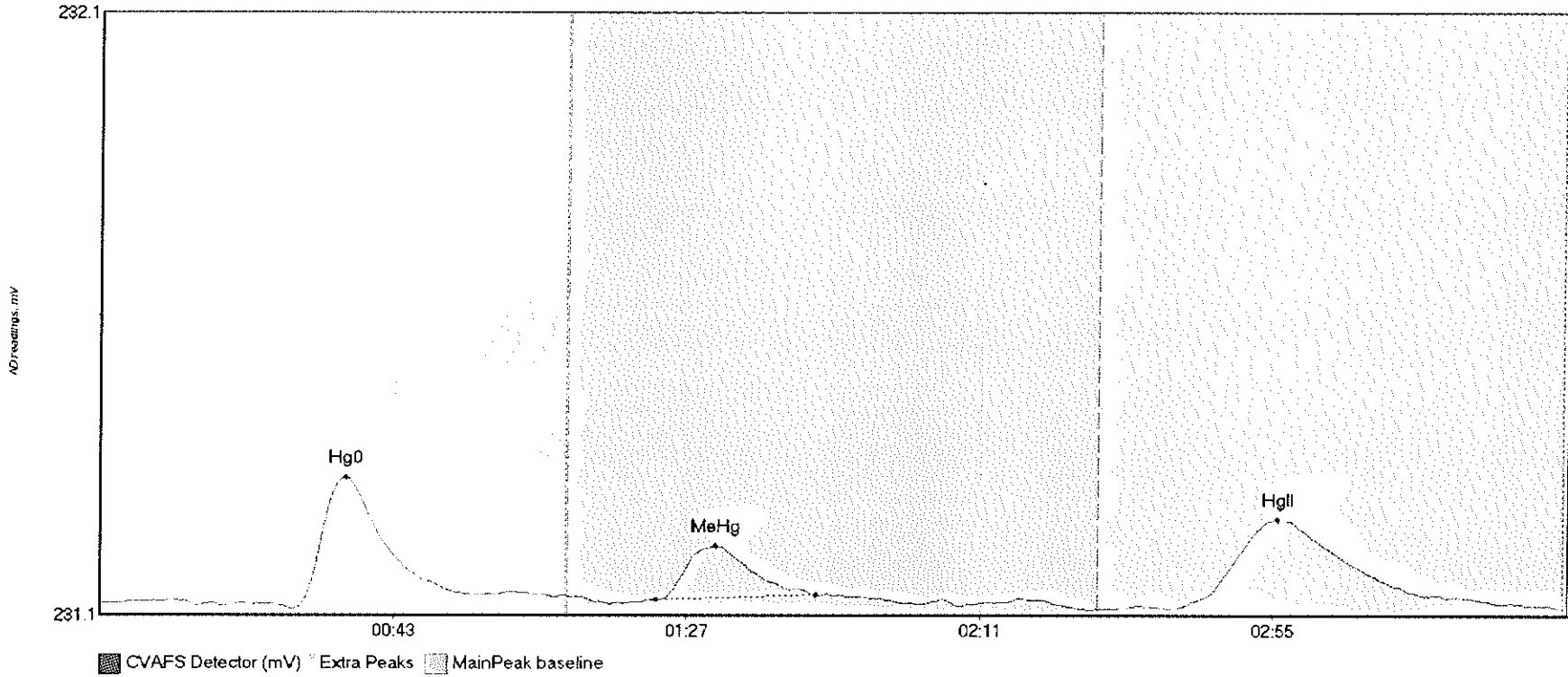
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-ICB1 Hg0	33.840	25.9	69.1	231.26	231.27	36.4	0.264	OK	231.2539	0.00	0.00	
SEQ-ICB1 MeHg	8.176	82.7	106.3	231.27	231.27	92.2	0.075	OK	231.2539	0.00	0.00	
SEQ-ICB1 HgII	21.262	153.8	212.7	231.25	231.25	176.4	0.102	OK	231.2539	0.00	0.00	

#11: F612262-BLK4



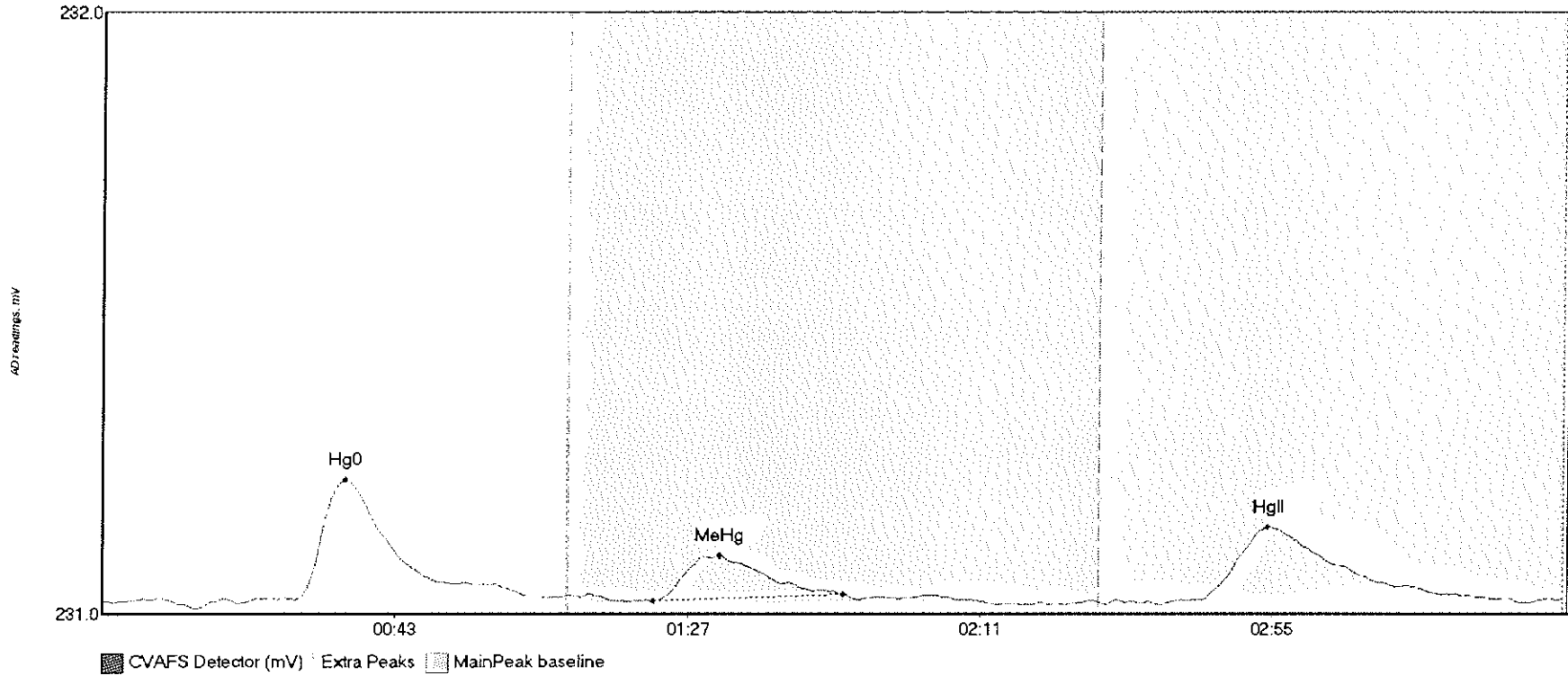
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BiShift	Comment
F612262-BLK4 Hg	28.725	28.3	69.1	231.17	231.19	37.2	0.251	OK	231.1734	0.00	0.00	
F612262-BLK4 Me	11.565	82.2	108.8	231.18	231.19	92.2	0.096	OK	231.1734	0.00	0.00	
F612262-BLK4 Hg	25.338	158.8	212.7	231.17	231.17	175.3	0.129	OK	231.1734	0.00	0.00	

#12: F612262-BLK5



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612262-BLK5 Hg	24.059	29.1	68.0	231.10	231.12	36.8	0.218	OK	231.1102	0.00	-0.01	
F612262-BLK5 Me	9.660	83.4	107.4	231.11	231.12	92.5	0.090	OK	231.1102	0.00	-0.01	
F612262-BLK5 Hg	28.173	162.6	214.8	231.10	231.10	176.8	0.146	OK	231.1102	0.00	-0.01	

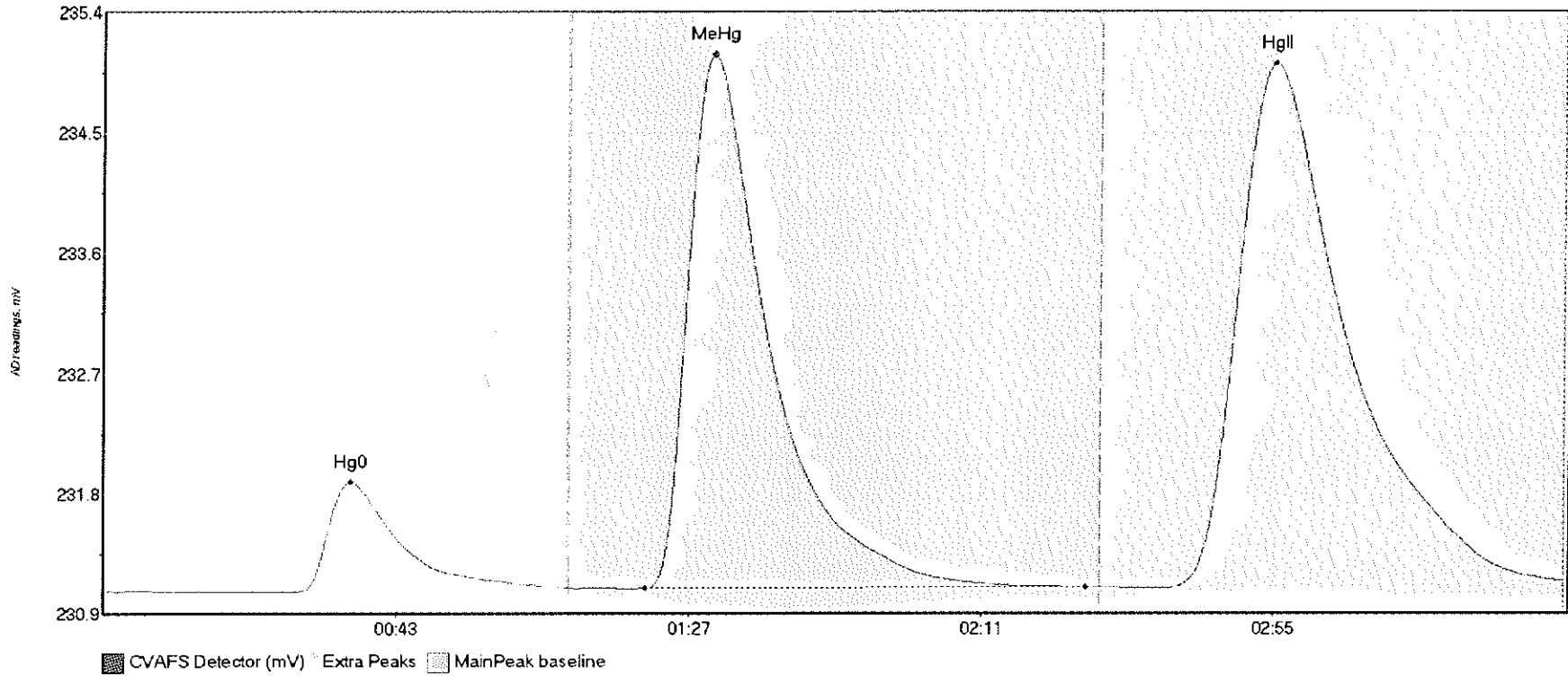
#13: F612262-BLK6



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612262-BLK6 Hg	23.984	29.0	67.0	231.06	231.07	36.6	0.199	OK	231.0587	0.00	0.00	
F612262-BLK6 Me	9.816	82.9	111.4	231.06	231.07	92.7	0.076	OK	231.0587	0.00	0.00	
F612262-BLK6 Hg	22.083	163.3	213.4	231.06	231.06	175.5	0.122	OK	231.0587	0.00	0.00	

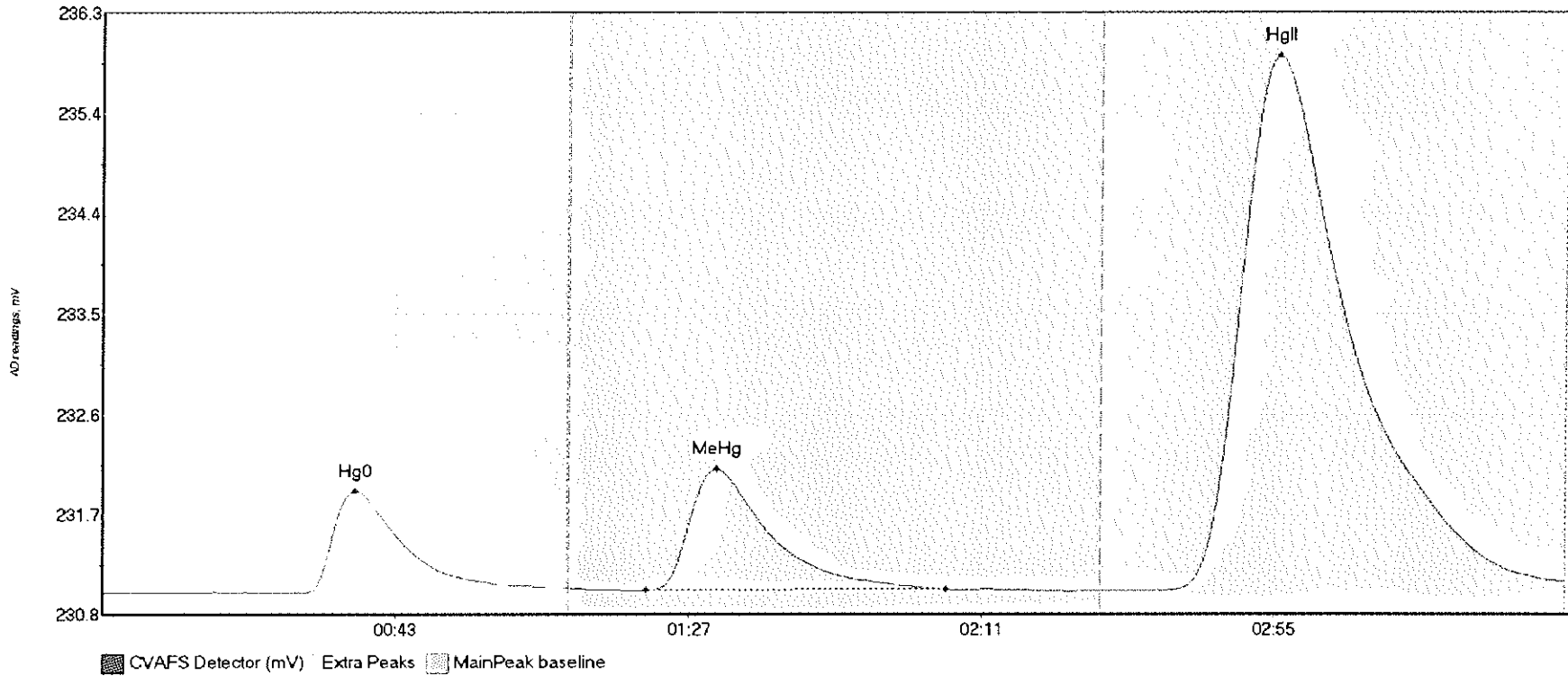


#14: 1611242-04RE1



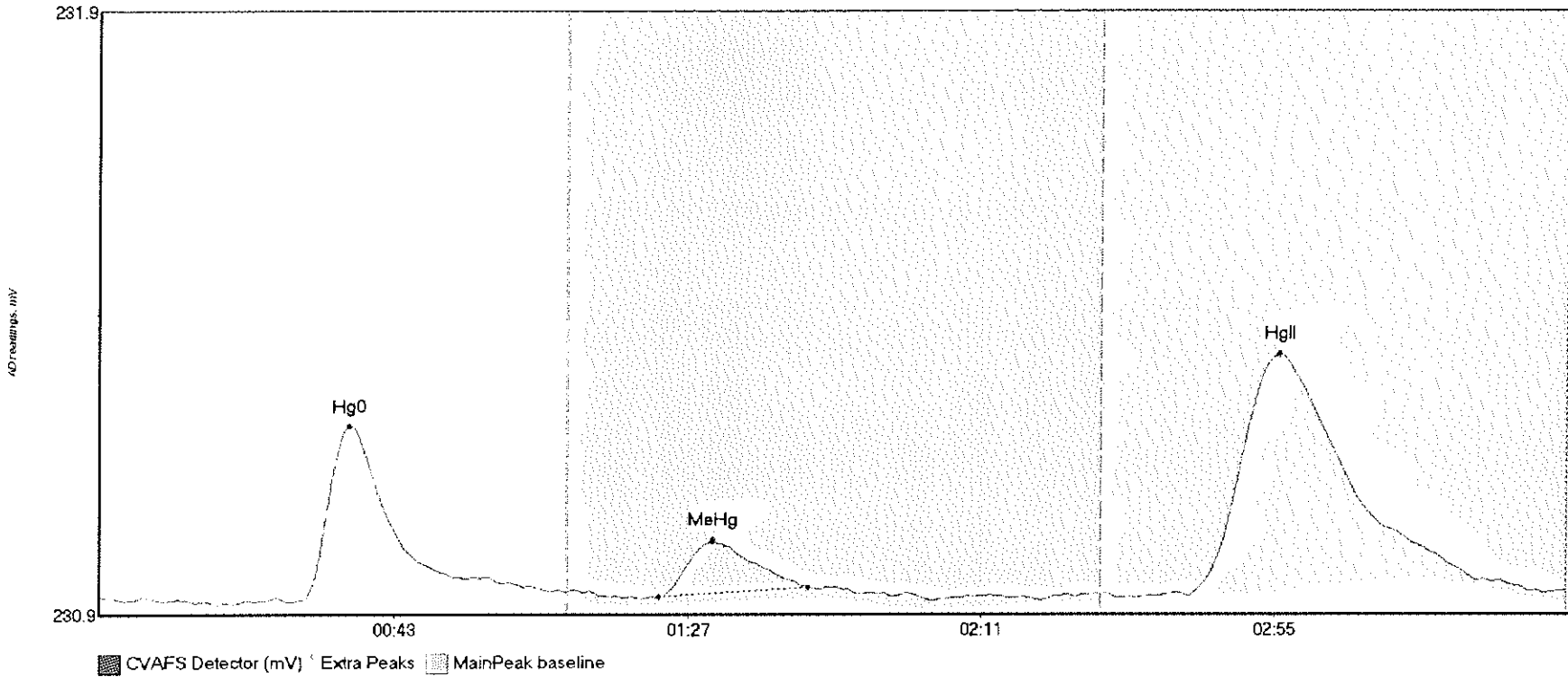
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BiShift	Comment
1611242-04RE1 H	100.998	29.0	69.9	231.02	231.05	37.1	0.835	CT	231.0249	0.00	0.08	
1611242-04RE1 M	579.894	81.4	147.7	231.05	231.06	91.7	4.073	OK	231.0249	0.00	0.08	
1611242-04RE1 H	753.811	159.8	219.7	231.05	231.11	176.2	4.603	OK	231.0249	0.00	0.08	

#15: 1611242-11RE1



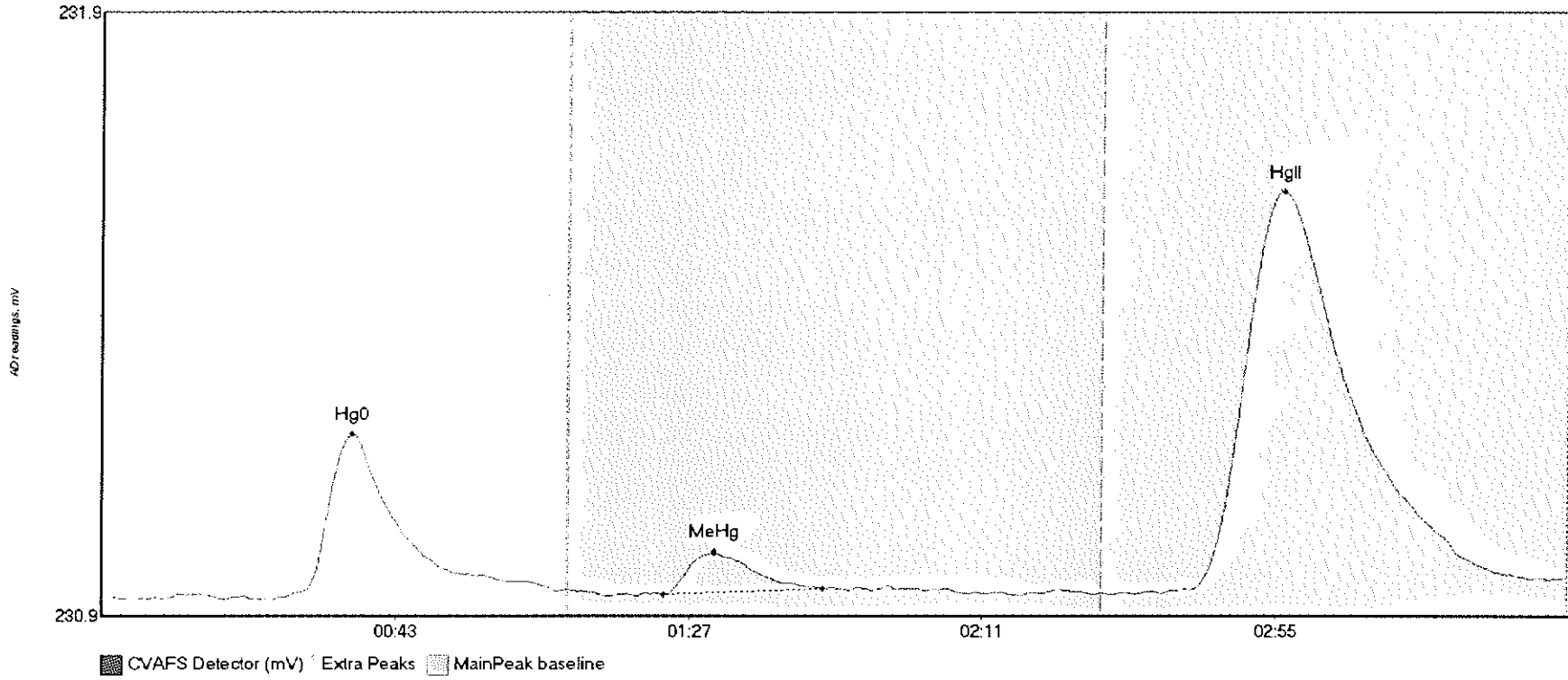
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611242-11RE1 H	110.835	30.2	69.9	230.99	231.03	38.0	0.929	CT	230.9864	0.00	0.11	
1611242-11RE1 M	153.567	81.6	126.7	231.01	231.02	92.1	1.107	OK	230.9864	0.00	0.11	
1611242-11RE1 H	920.018	157.7	219.8	231.01	231.09	176.6	4.879	CT	230.9864	0.00	0.11	

#16: F612292-BLK1



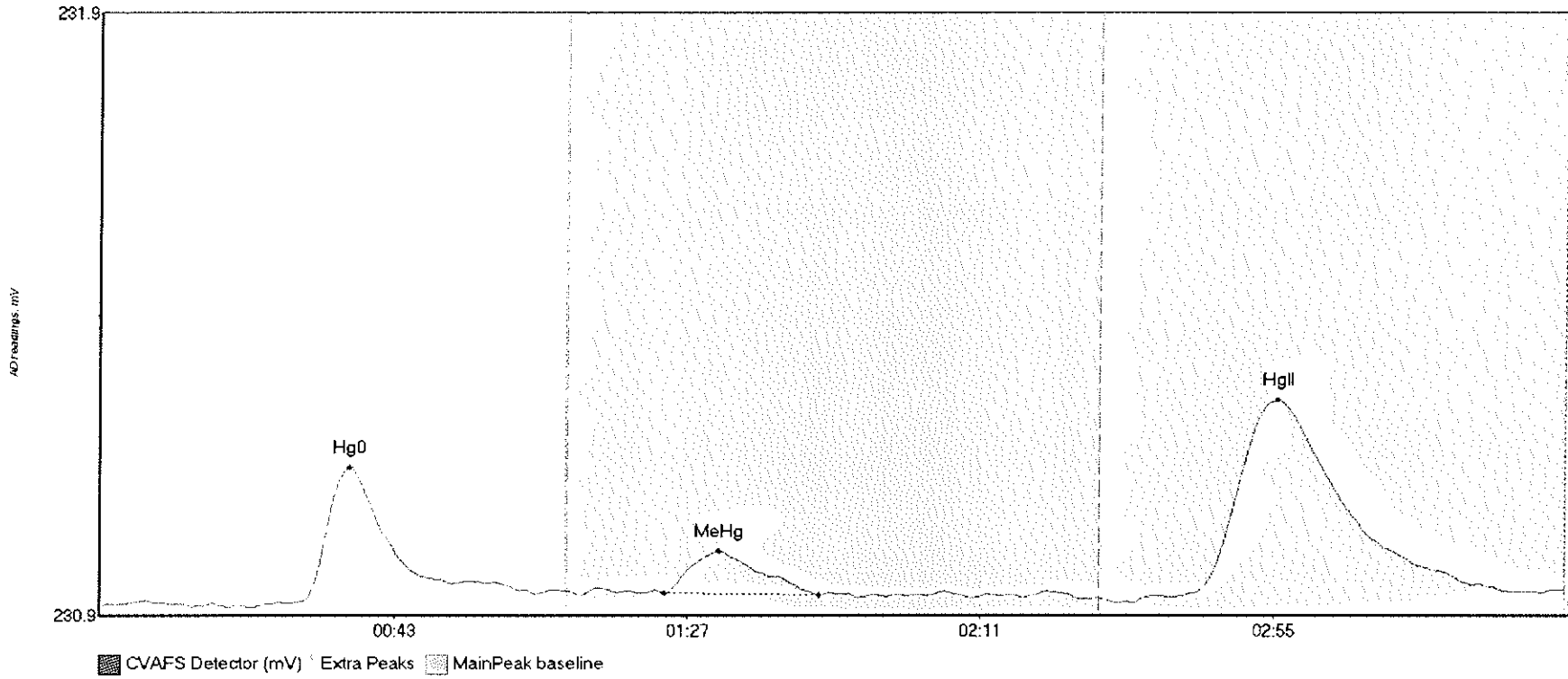
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BLK1 Hg	31.627	30.2	69.6	230.97	230.98	37.3	0.291	OK	230.9727	0.00	0.01	
F612292-BLK1 Me	9.659	83.6	106.0	230.97	230.99	91.7	0.092	OK	230.9727	0.00	0.01	
F612292-BLK1 Hg	75.295	162.8	214.4	230.97	230.98	176.8	0.400	OK	230.9727	0.00	0.01	

#17: F612292-BLK2



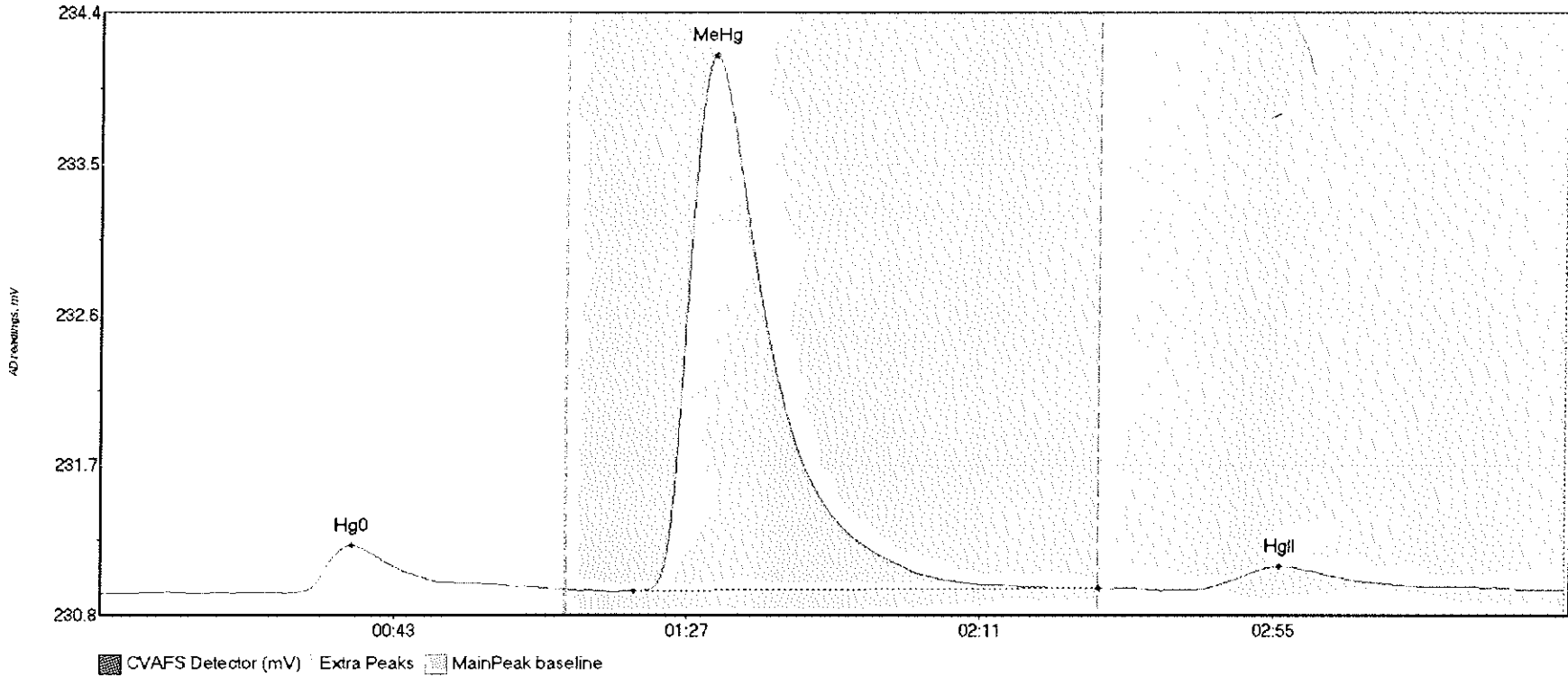
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BLK2 Hg	32.134	27.4	68.3	230.95	230.96	37.4	0.270	OK	230.9512	0.00	0.03	
F612292-BLK2 Me	7.351	84.2	108.0	230.96	230.97	91.8	0.070	OK	230.9512	0.00	0.03	
F612292-BLK2 Hg	119.721	161.0	217.1	230.96	230.98	177.0	0.663	OK	230.9512	0.00	0.03	

#18: F612292-BLK3



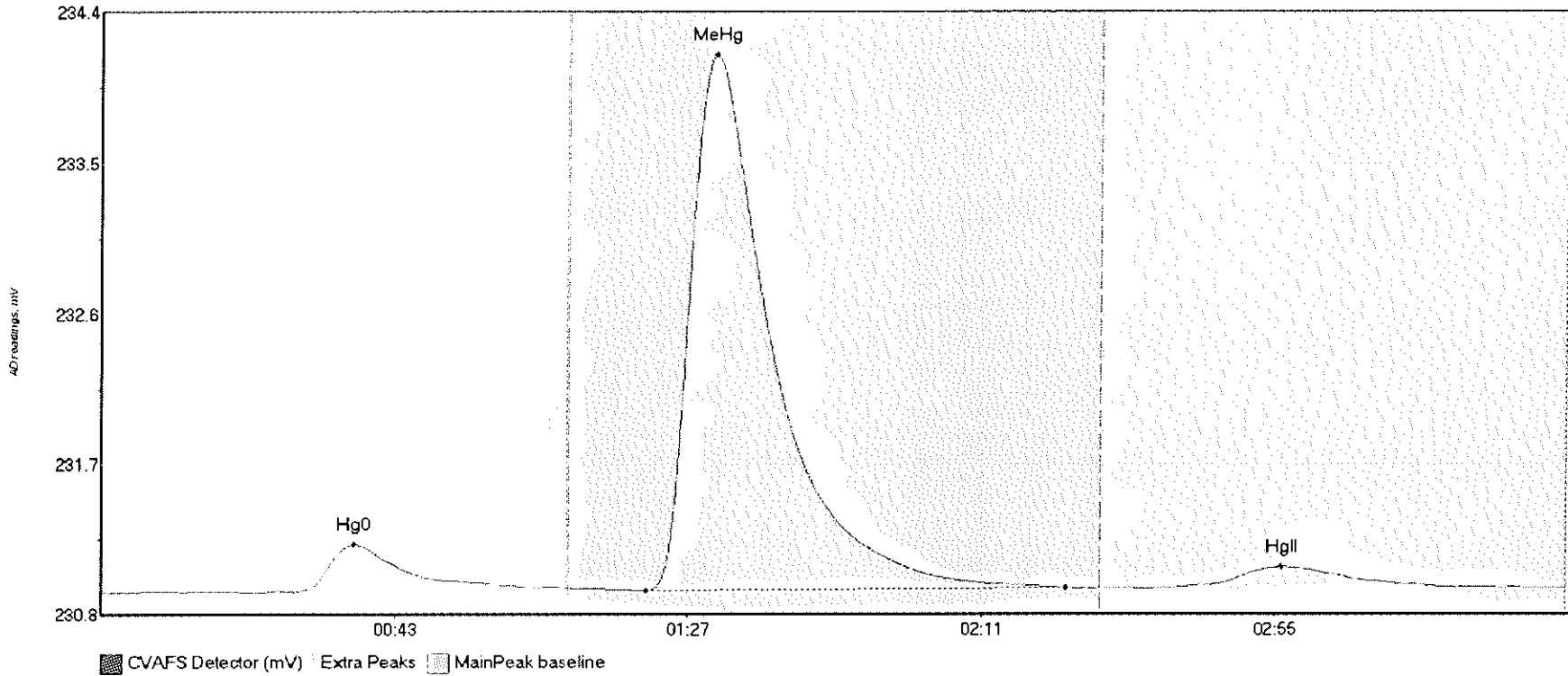
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BLK3 Hg	24.094	28.7	65.4	230.94	230.95	37.3	0.225	OK	230.9318	0.00	0.03	
F612292-BLK3 Me	8.223	84.6	107.7	230.95	230.95	92.7	0.070	OK	230.9318	0.00	0.03	
F612292-BLK3 Hg	58.721	161.4	216.6	230.95	230.95	176.6	0.327	OK	230.9318	0.00	0.03	

#19: F612292-BS1



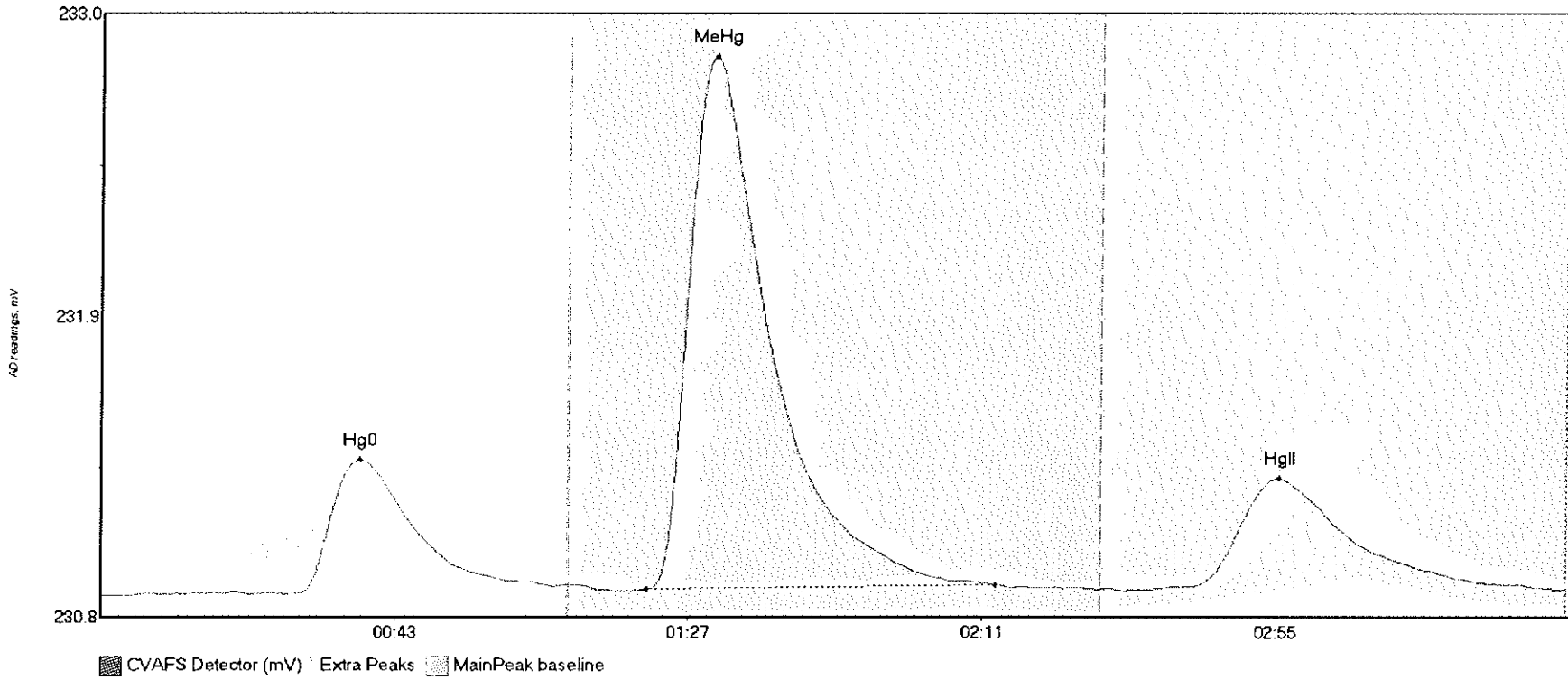
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BS1 Hg0	36.954	27.9	69.9	230.92	230.94	37.7	0.286	CT	230.9125	0.00	0.02	
F612292-BS1 MeH	455.583	80.2	150.0	230.93	230.94	92.1	3.201	CT	230.9125	0.00	0.02	
F612292-BS1 HgI	23.470	163.1	210.6	230.93	230.95	176.9	0.142	OK	230.9125	0.00	0.02	

#20: F612292-BSD1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BSD1 Hg	35.874	29.0	69.9	230.92	230.94	37.8	0.288	CT	230.9108	0.00	0.03	
F612292-BSD1 Me	461.989	81.7	144.8	230.92	230.94	92.2	3.260	OK	230.9108	0.00	0.03	
F612292-BSD1 Hg	21.977	160.9	203.6	230.94	230.94	177.0	0.124	OK	230.9108	0.00	0.03	

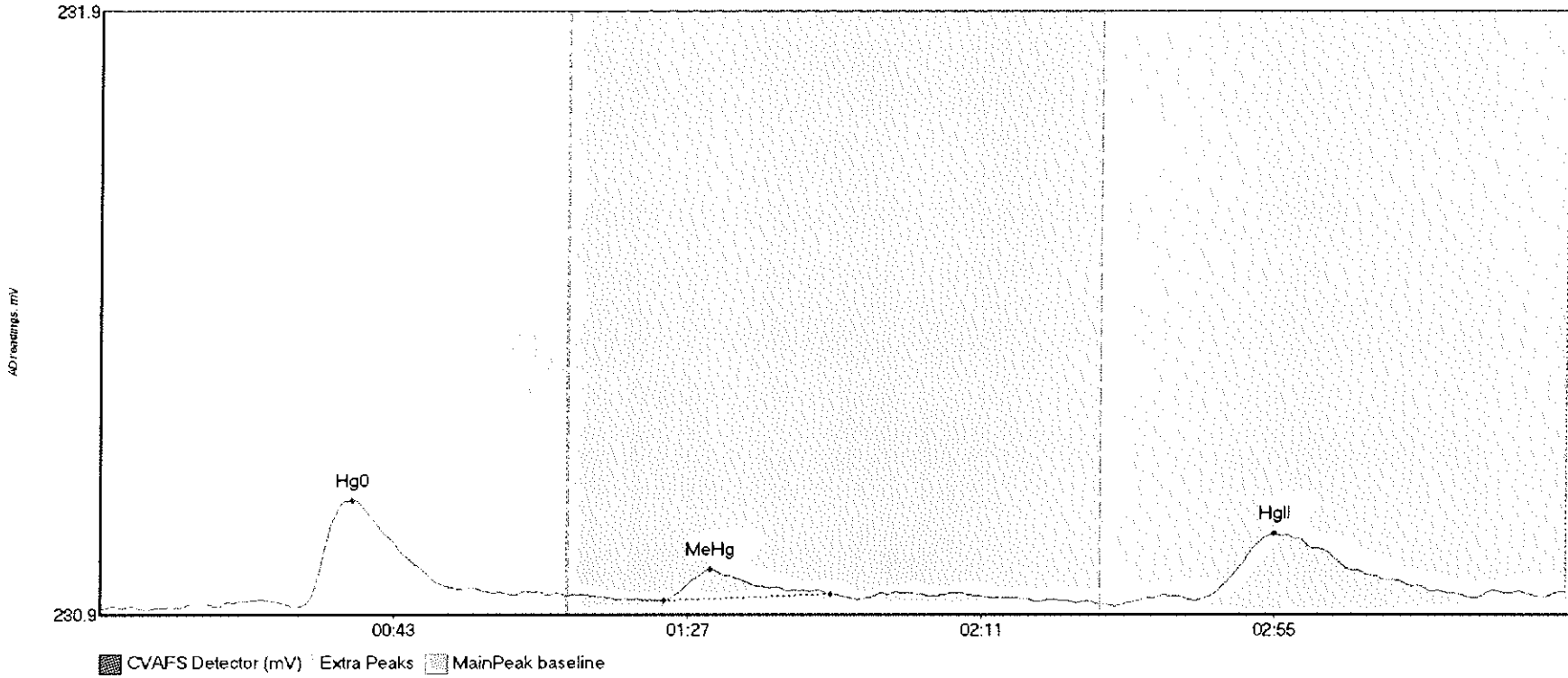
#21: SEQ-CCV1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV1 Hg0	63.906	22.5	67.8	230.92	230.94	38.9	0.472	OK	230.9105	0.00	0.02	
SEQ-CCV1 MeHg	263.575	81.9	134.0	230.93	230.95	92.1	1.866	OK	230.9105	0.00	0.02	
SEQ-CCV1 HgII	73.073	157.2	215.4	230.93	230.94	176.6	0.390	OK	230.9105	0.00	0.02	

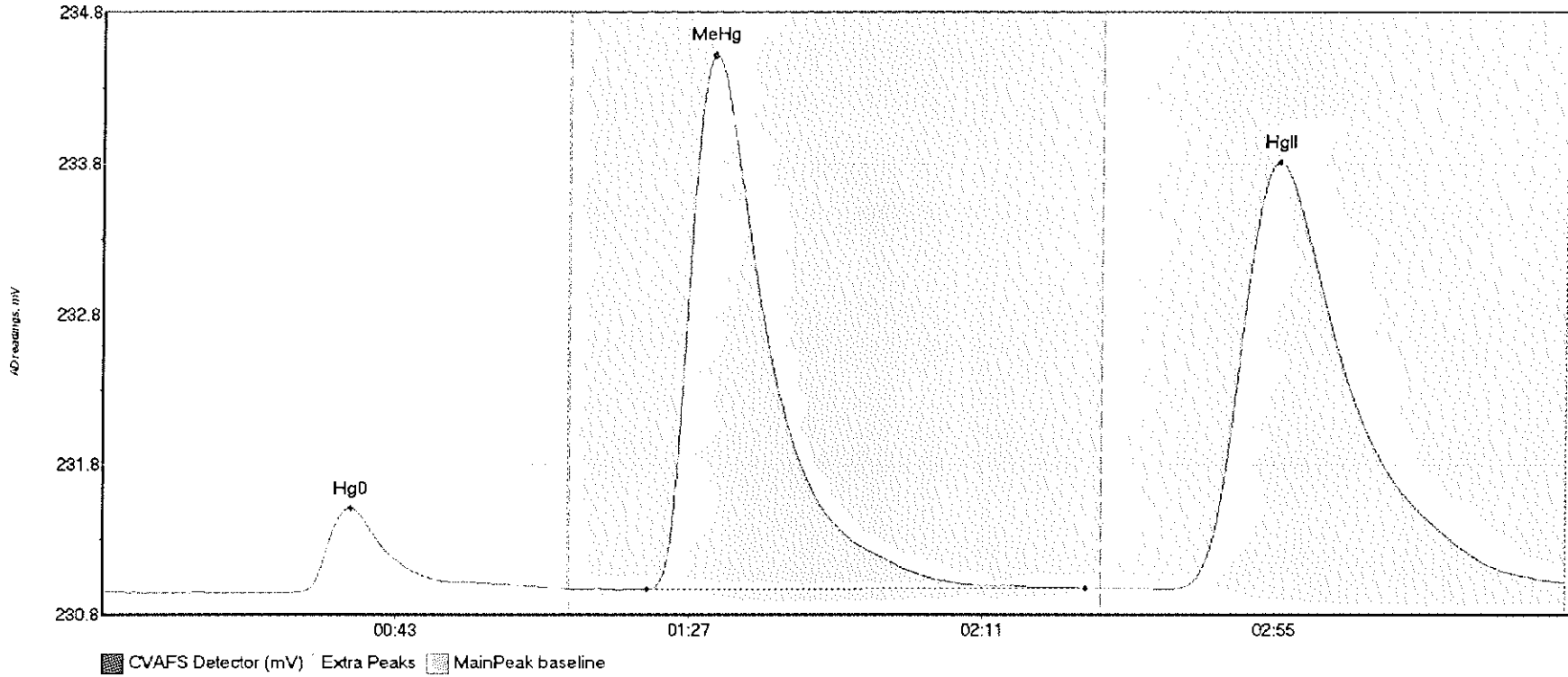


#22: SEQ-CCB1



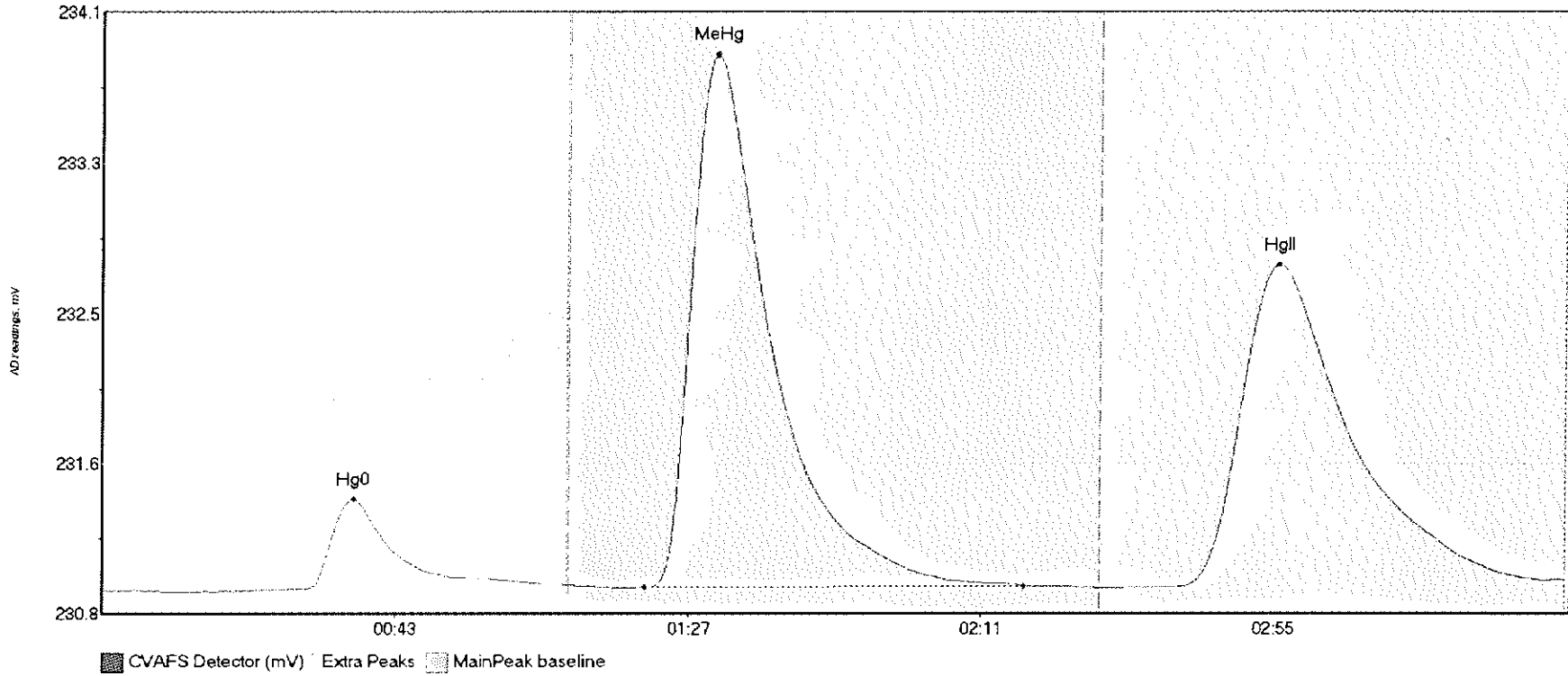
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BiShift	Comment
SEQ-CCB1 Hg0	22.598	29.2	69.7	230.90	230.92	37.8	0.179	OK	230.8989	0.00	0.03	
SEQ-CCB1 MeHg	5.318	84.5	109.4	230.91	230.92	91.4	0.052	OK	230.8989	0.00	0.03	
SEQ-CCB1 HgII	20.815	155.0	206.1	230.91	230.92	176.1	0.113	OK	230.8989	0.00	0.03	

#23: 1611242-12



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611242-12 Hg0	61.840	29.5	69.8	230.91	230.93	37.3	0.570	OK	230.9106	0.00	0.06	
1611242-12 MeHg	504.219	81.7	147.6	230.92	230.93	91.8	3.622	OK	230.9106	0.00	0.06	
1611242-12 HgII	537.007	161.0	219.8	230.93	230.97	176.6	2.893	CT	230.9106	0.00	0.06	

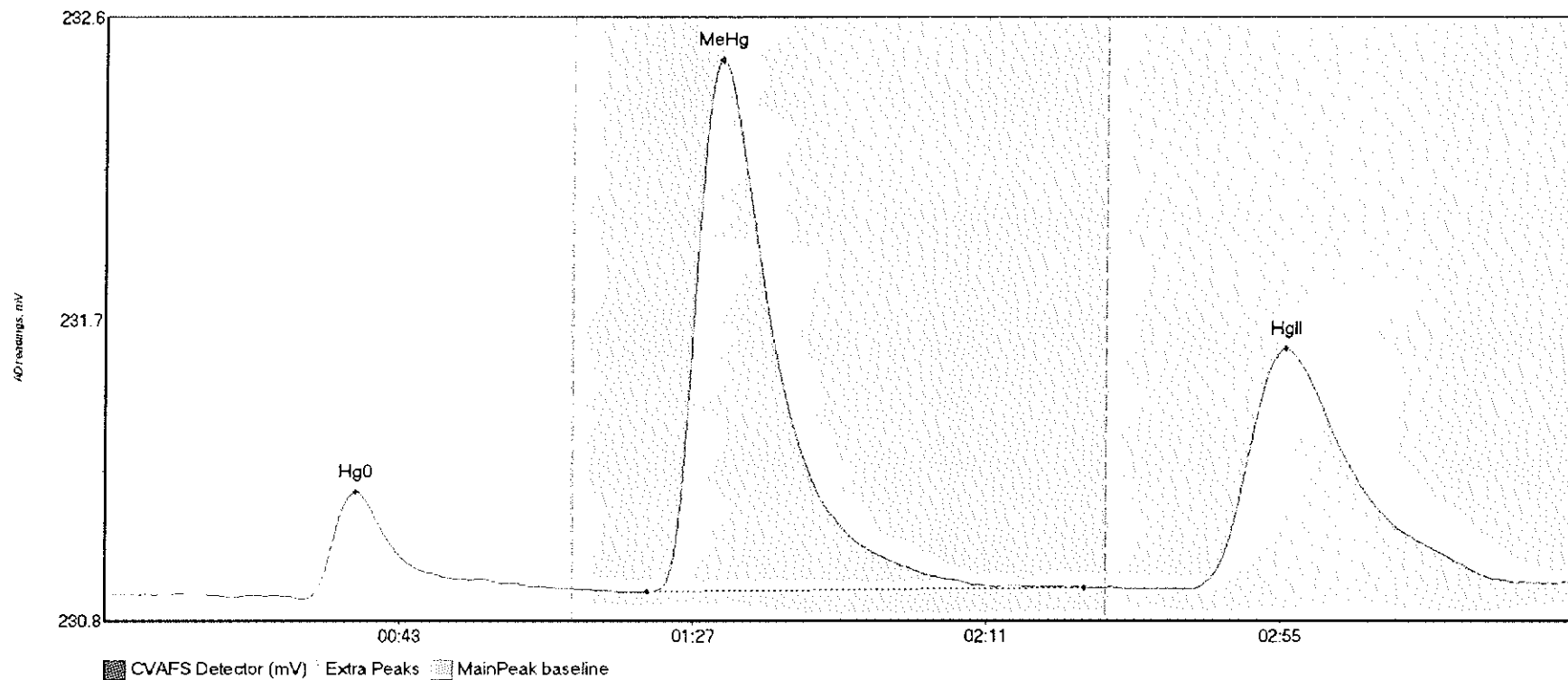
#24: 1611242-13



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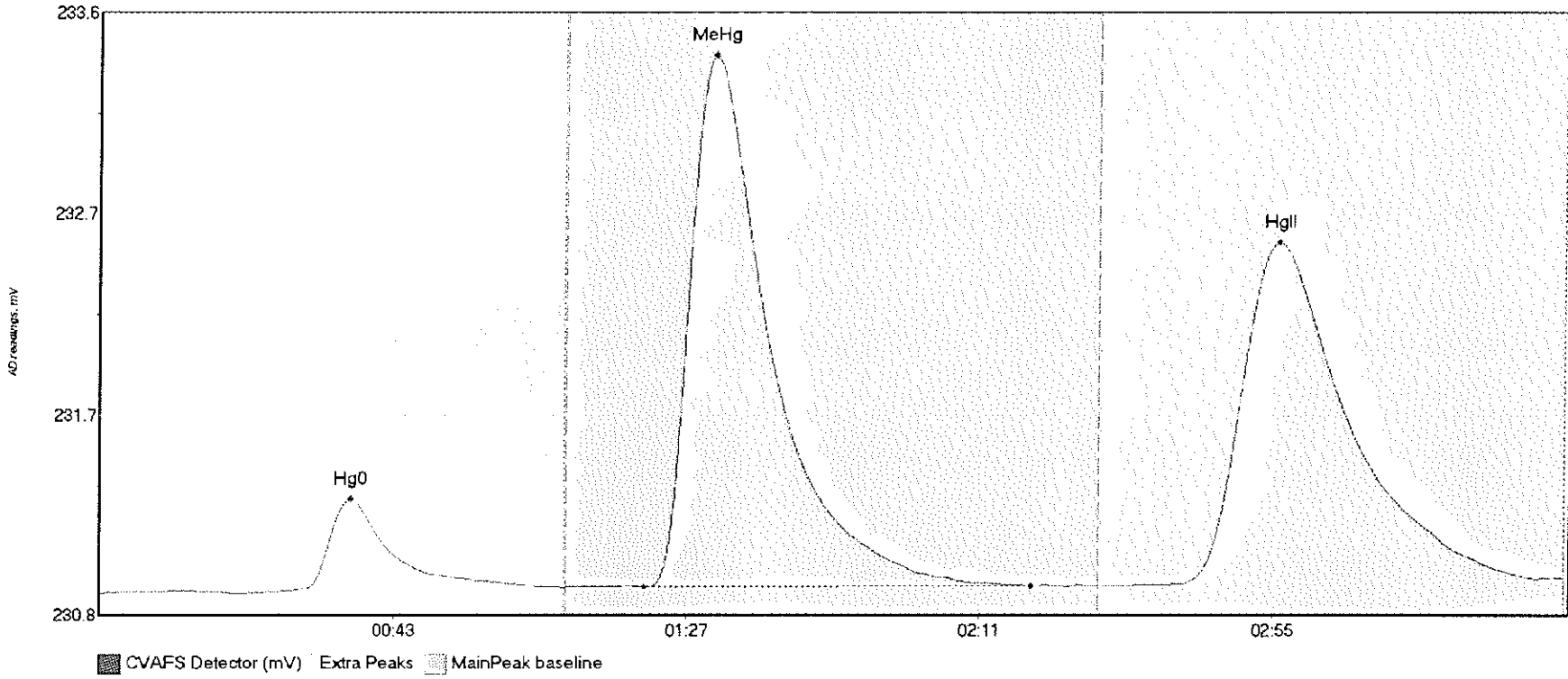
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611242-13 Hg0	54.599	21.5	69.9	230.90	230.94	37.7	0.515	CT	230.9055	0.00	0.06	
1611242-13 MeHg	411.693	81.5	138.5	230.93	230.93	92.1	2.967	OK	230.9055	0.00	0.06	
1611242-13 HgII	333.671	150.5	219.8	230.93	230.97	176.8	1.801	CT	230.9055	0.00	0.06	

#25: 1611242-14



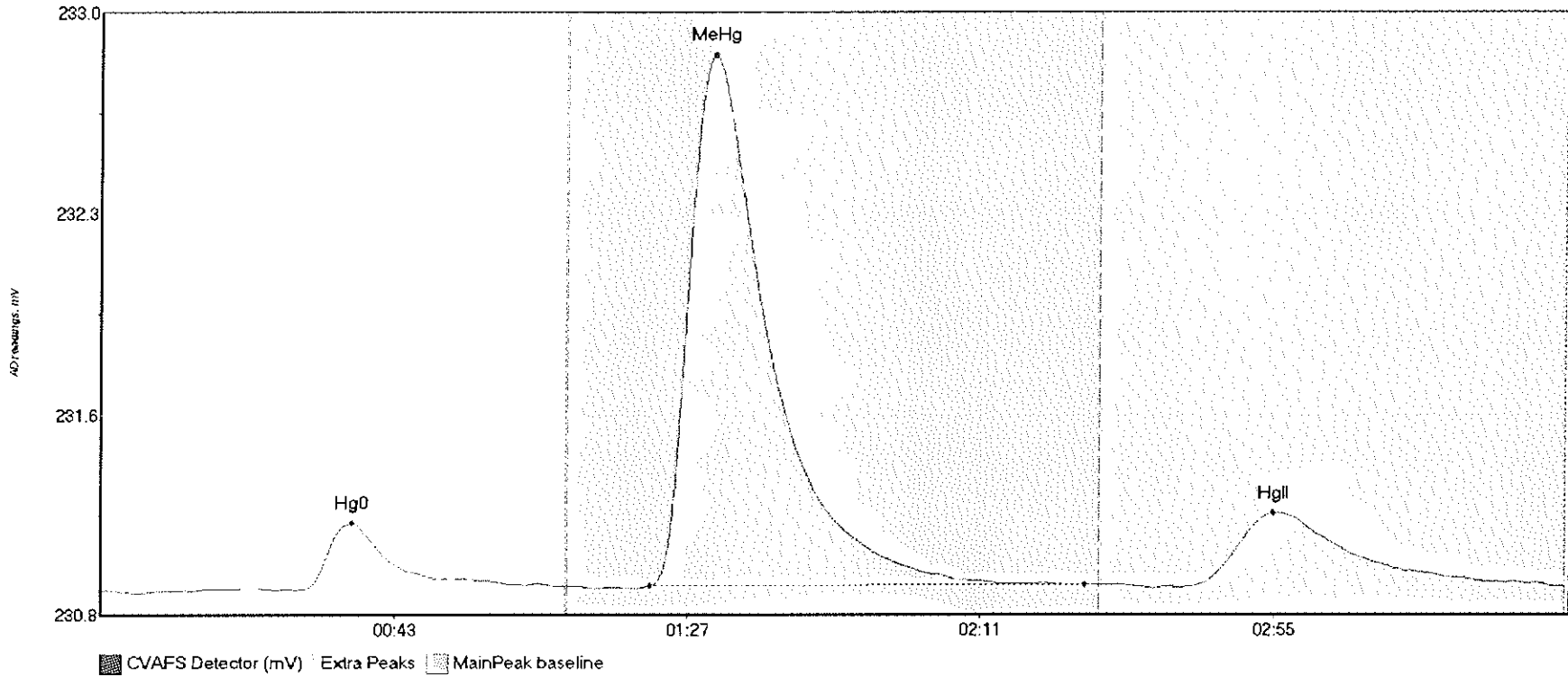
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	ElShift	Comment
1611242-14 Hg0	34.537	29.3	69.1	230.89	230.93	37.5	0.312	OK	230.9093	0.00	0.03	
1611242-14 MeHg	213.479	81.2	146.8	230.92	230.93	92.2	1.540	OK	230.9093	0.00	0.03	
1611242-14 HgII	126.615	162.9	219.8	230.92	230.94	176.7	0.698	CT	230.9093	0.00	0.03	

#26: 1611249-01



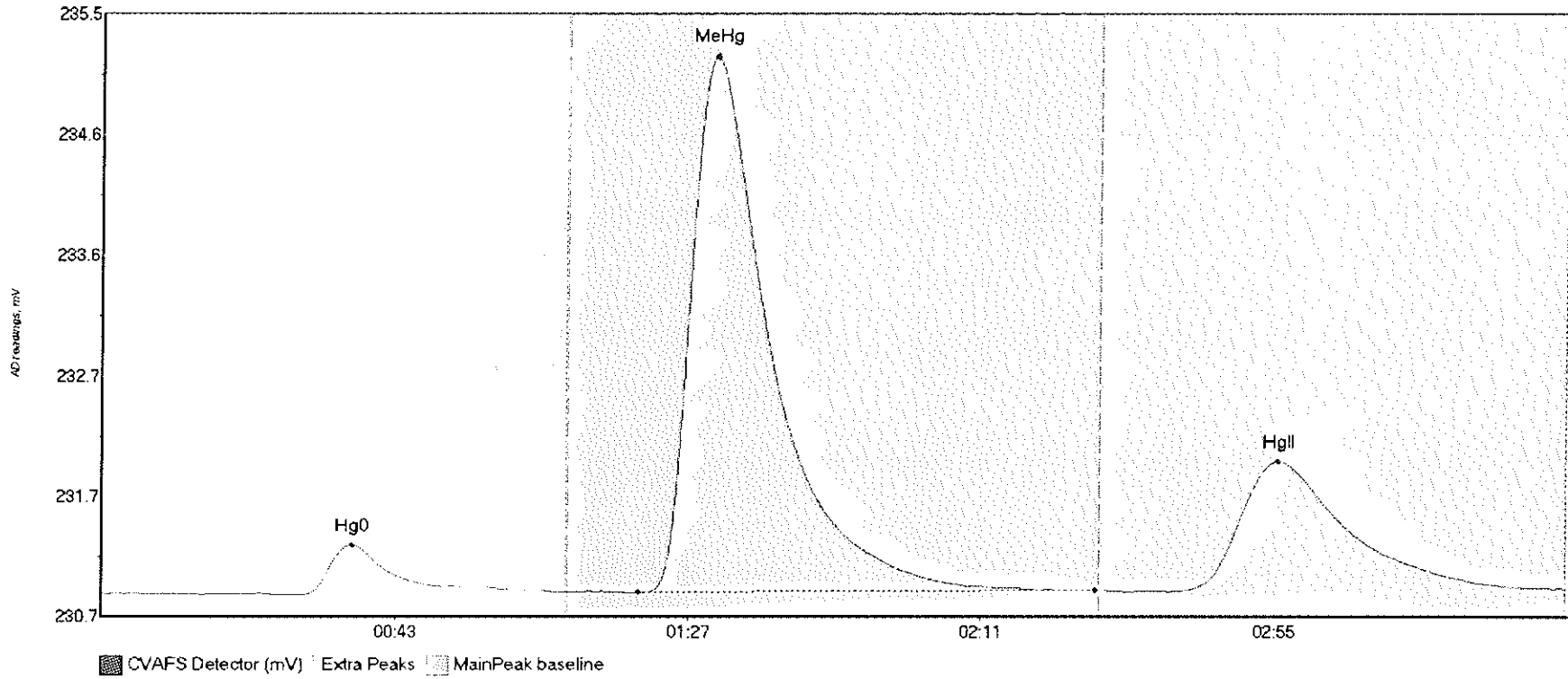
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-01 Hg0	47.195	23.9	69.5	230.91	230.93	37.6	0.438	OK	230.9059	0.00	0.07	
1611249-01 MeHg	348.820	81.7	139.9	230.94	230.94	92.2	2.507	OK	230.9059	0.00	0.07	
1611249-01 HgII	297.662	158.4	215.7	230.94	230.97	176.9	1.620	OK	230.9059	0.00	0.07	

#27: 1611249-02



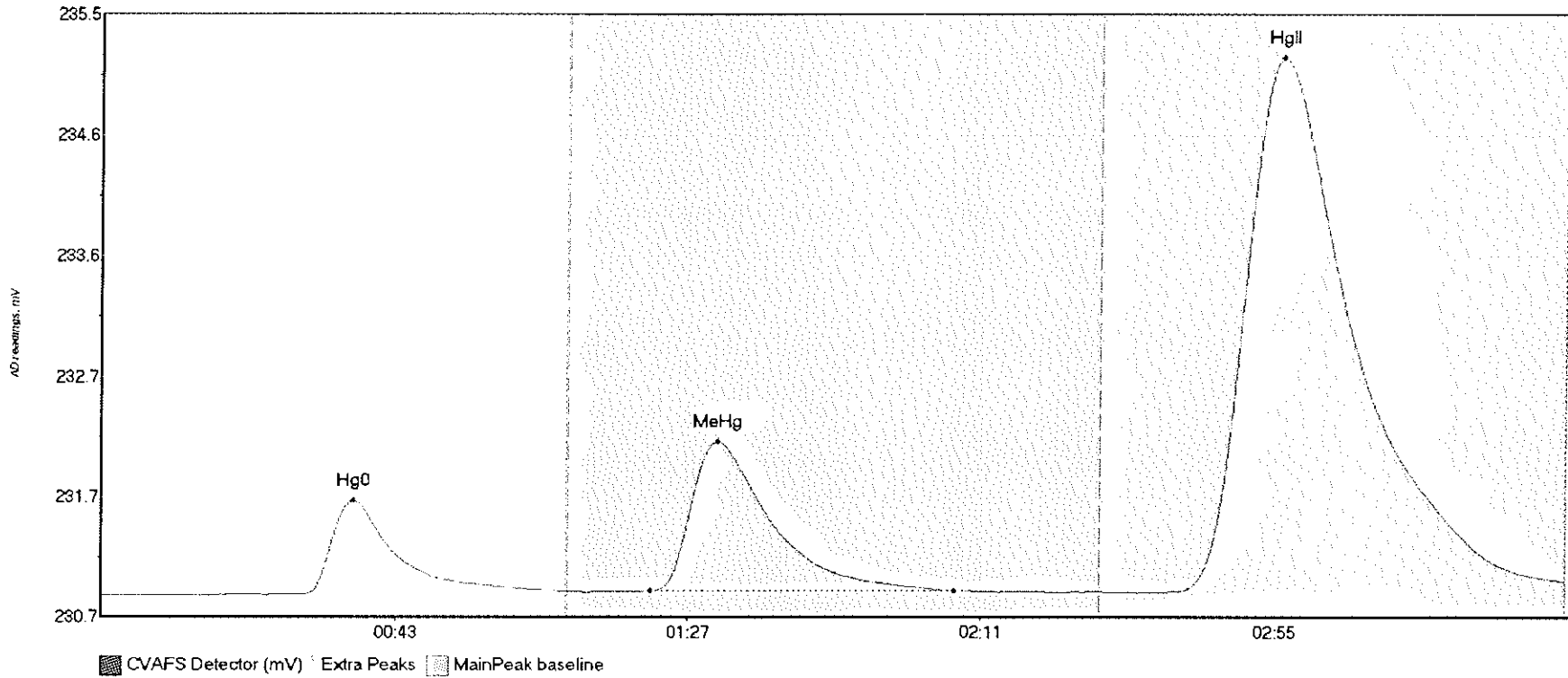
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-02 Hg0	26.190	29.2	68.2	230.92	230.94	37.6	0.244	OK	230.9206	0.00	0.01	
1611249-02 MeHg	269.205	82.4	147.7	230.94	230.94	92.0	1.937	OK	230.9206	0.00	0.01	
1611249-02 HgII	49.798	163.3	214.3	230.93	230.95	175.9	0.270	OK	230.9206	0.00	0.01	

#28: 1611249-03



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-03 Hg0	43.214	29.7	69.4	230.91	230.94	37.6	0.397	OK	230.9218	0.00	0.04	
1611249-03 MeHg	593.483	80.6	149.3	230.93	230.95	92.1	4.269	OK	230.9218	0.00	0.04	
1611249-03 HgII	191.066	160.9	219.8	230.94	230.96	176.6	1.038	CT	230.9218	0.00	0.04	

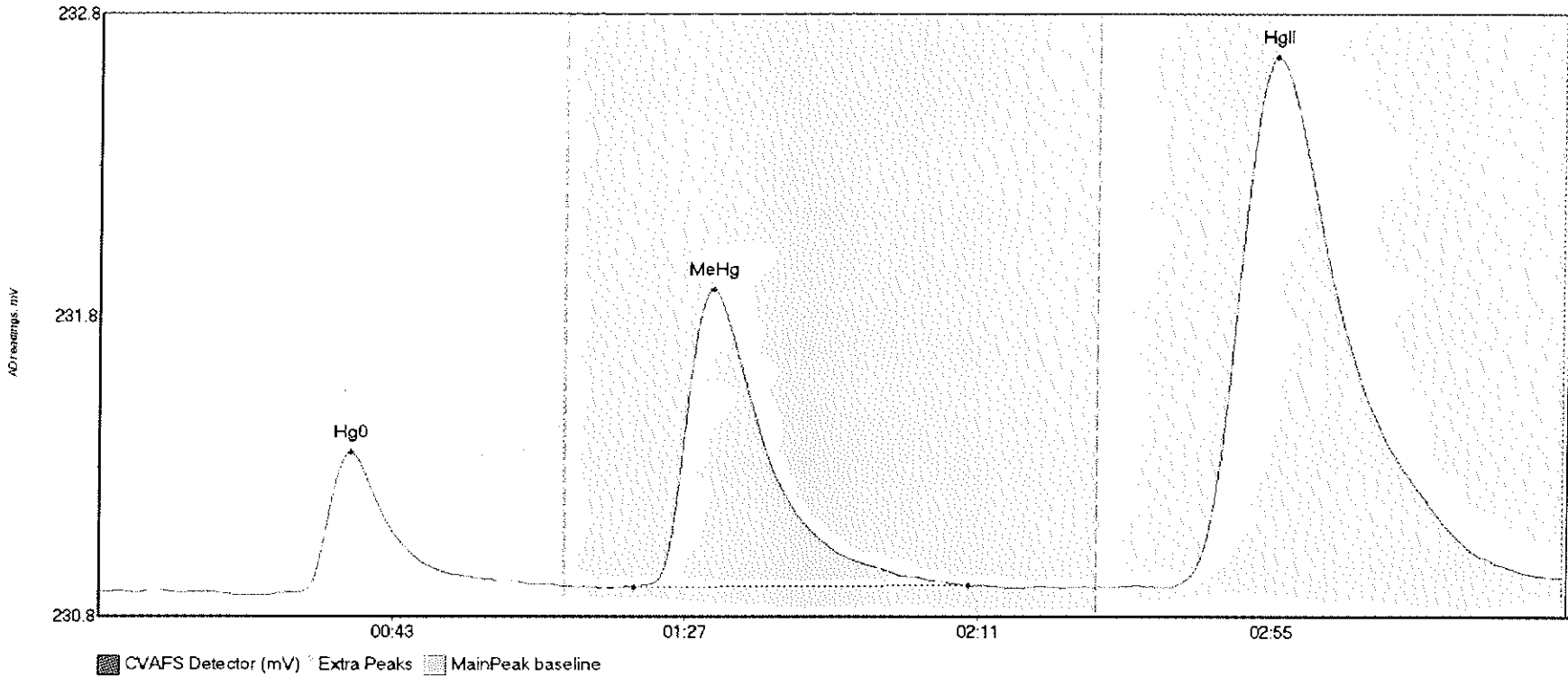
#29: 1611249-04



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-04 Hg0	80.354	27.5	69.8	230.93	230.95	37.7	0.744	OK	230.9241	0.00	0.11	
1611249-04 MeHg	162.387	82.5	128.0	230.96	230.96	92.4	1.184	OK	230.9241	0.00	0.11	
1611249-04 HgII	792.564	159.3	219.8	230.95	231.04	177.1	4.242	CT	230.9241	0.00	0.11	

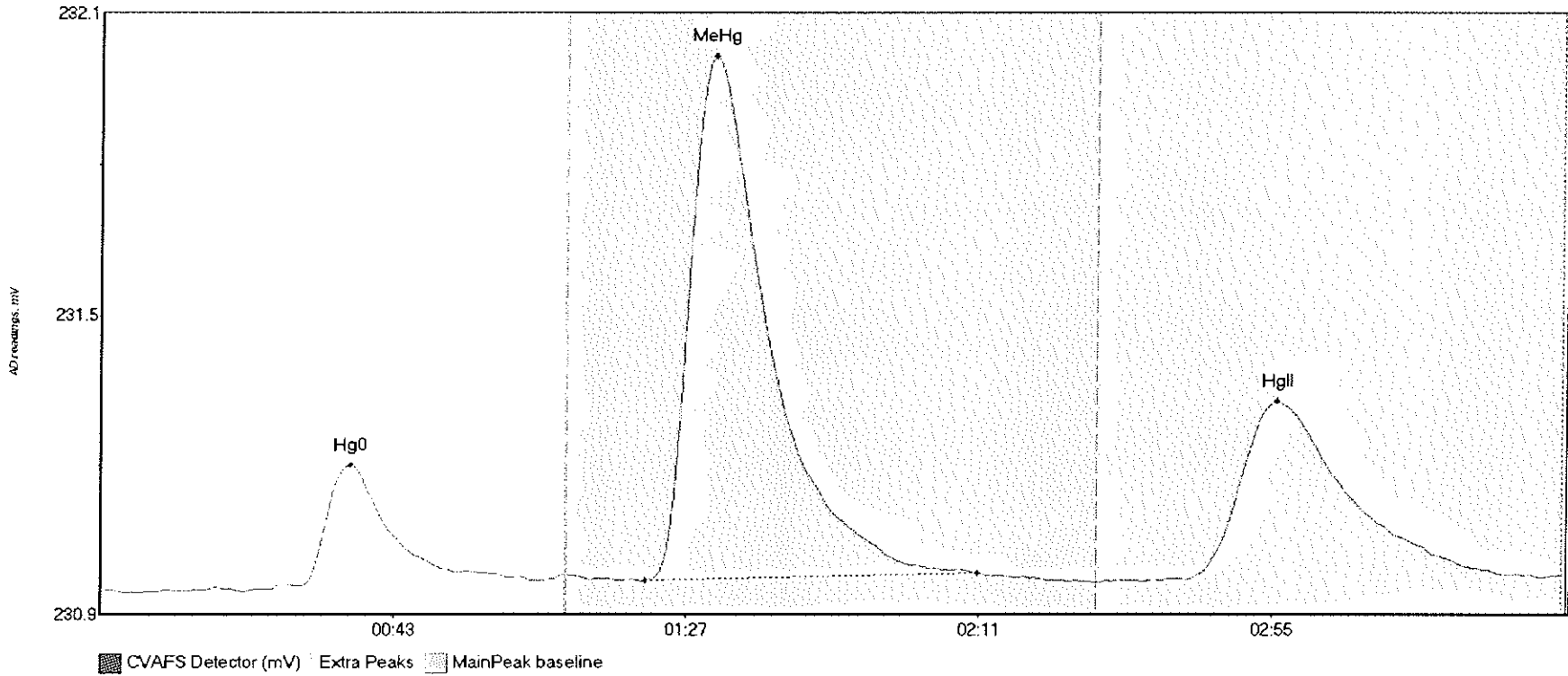


#30: 1611249-05



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-05 Hg0	48.982	29.8	69.8	230.93	230.95	37.7	0.455	OK	230.9299	0.00	0.05	
1611249-05 MeHg	134.796	80.5	130.6	230.95	230.95	92.1	0.974	OK	230.9299	0.00	0.05	
1611249-05 HgII	322.871	160.4	219.3	230.94	230.98	176.5	1.733	OK	230.9299	0.00	0.05	

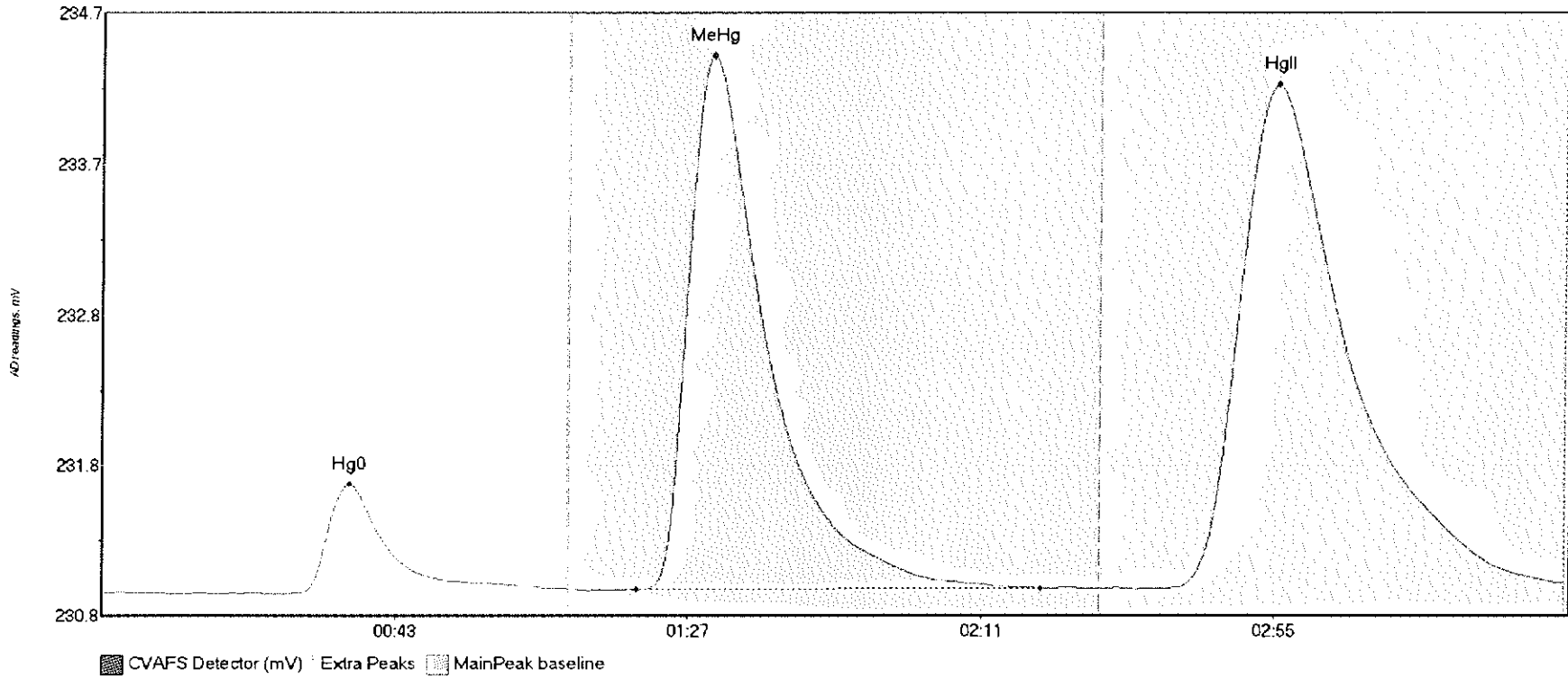
#31: 1611249-06



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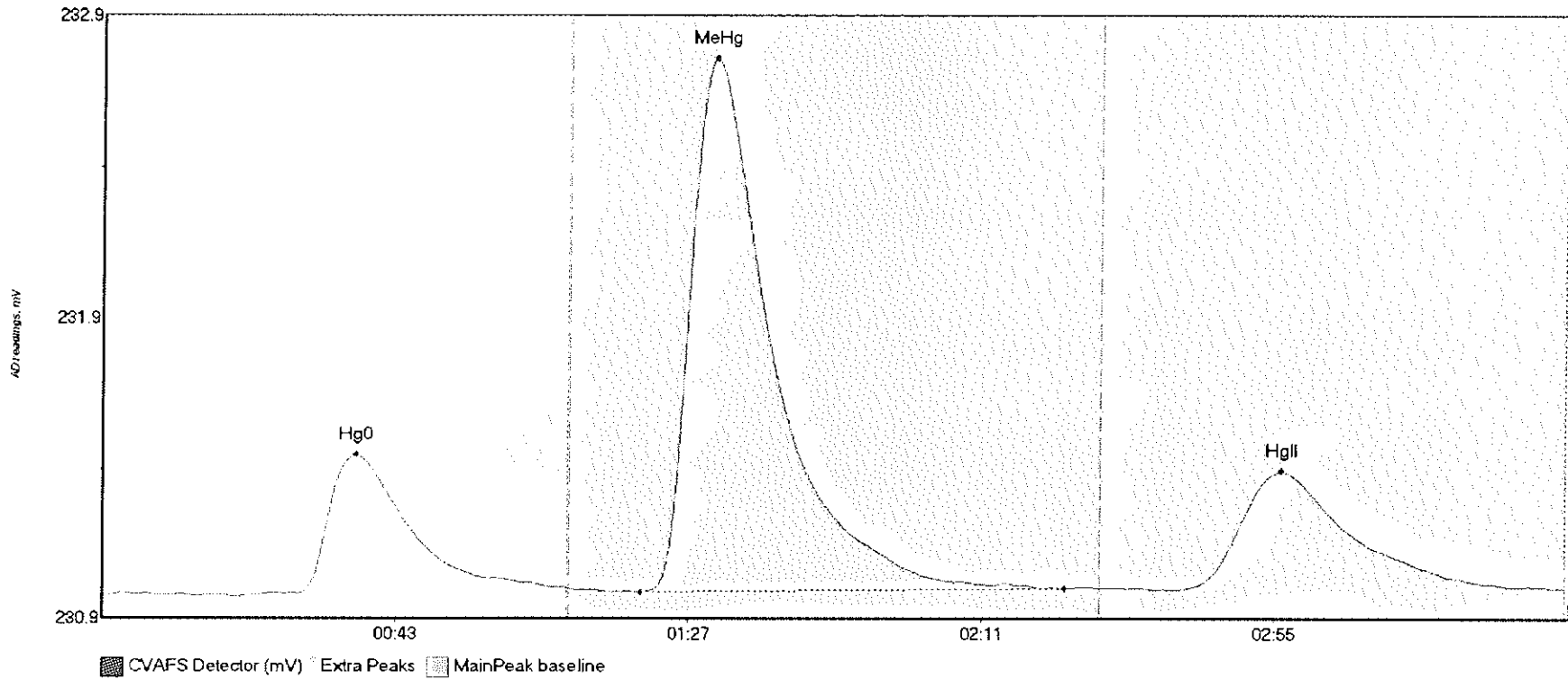
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-06 Hg0	28.661	25.8	66.1	230.92	230.94	37.6	0.262	OK	230.9202	0.00	0.03	
1611249-06 MeHg	150.202	81.9	131.9	230.94	230.96	92.3	1.104	OK	230.9202	0.00	0.03	
1611249-06 HgII	70.065	159.6	216.6	230.94	230.95	176.8	0.377	OK	230.9202	0.00	0.03	

#32: 1611249-07



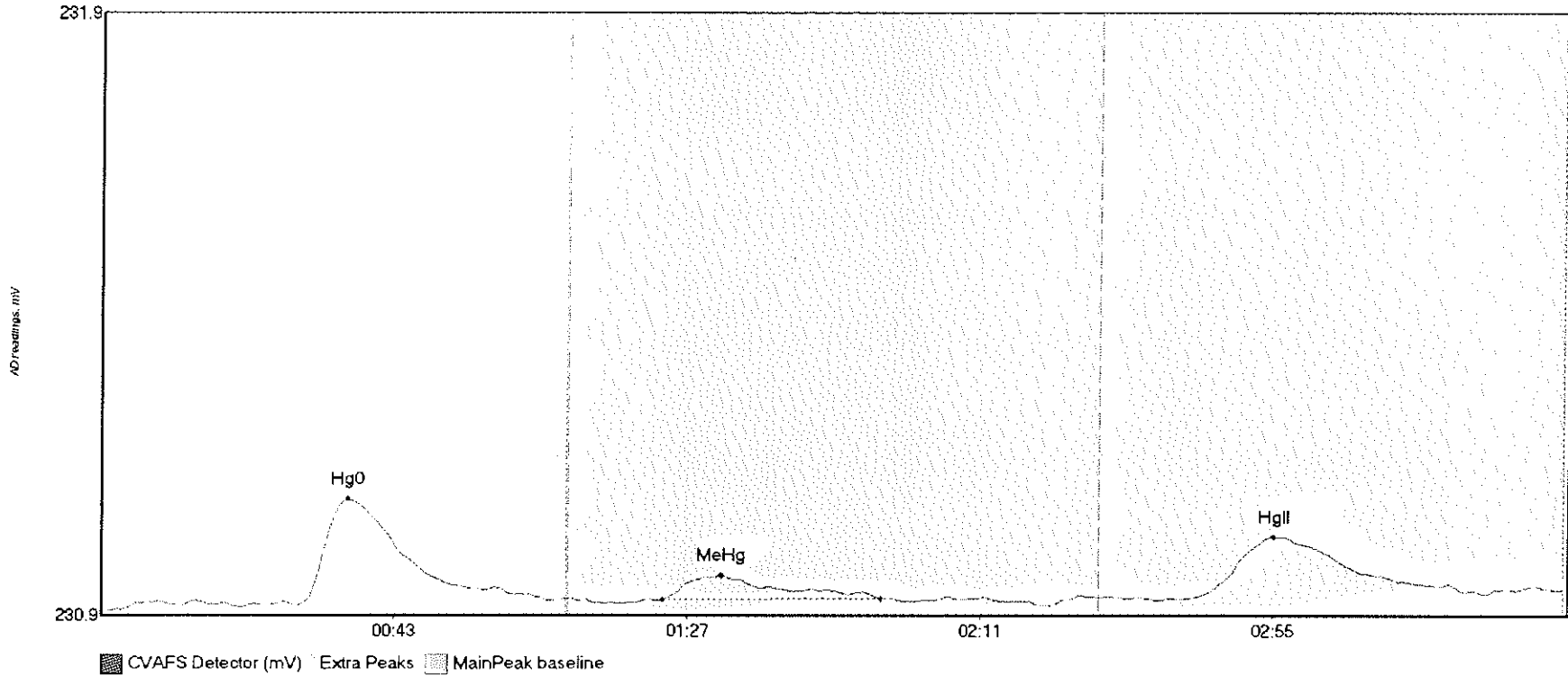
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-07 Hg0	71.766	28.2	69.9	230.93	230.96	37.2	0.717	CT	230.9317	0.00	0.07	
1611249-07 MeHg	480.603	80.3	141.0	230.95	230.96	91.7	3.496	OK	230.9317	0.00	0.07	
1611249-07 HgII	610.940	160.6	219.8	230.97	231.00	176.4	3.297	CT	230.9317	0.00	0.07	

#33: SEQ-CCV2



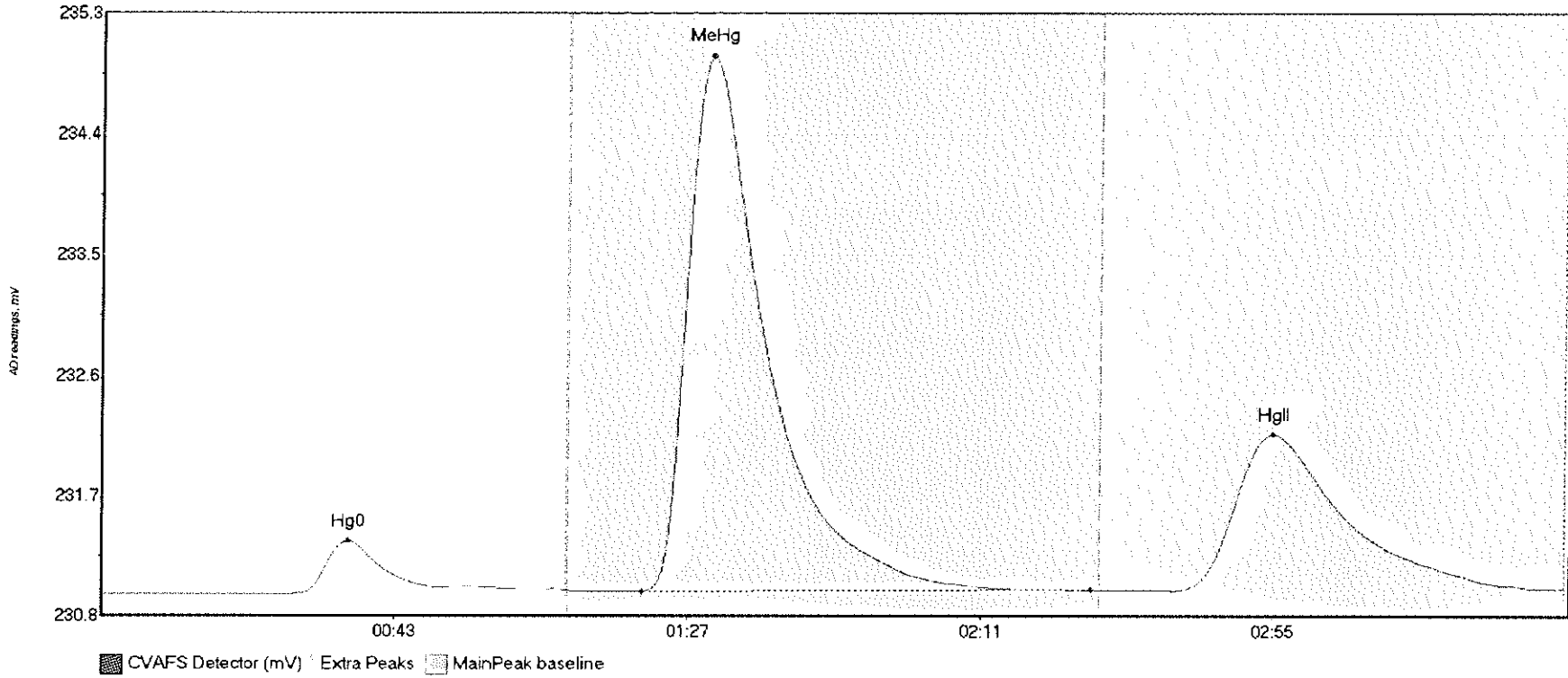
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV2 Hg0	62.158	29.5	69.9	230.94	230.96	38.1	0.461	CT	230.9405	0.00	0.02	
SEQ-CCV2 MeHg	254.245	80.8	144.6	230.95	230.96	92.0	1.770	OK	230.9405	0.00	0.02	
SEQ-CCV2 HgII	72.109	161.9	211.7	230.96	230.96	177.1	0.392	OK	230.9405	0.00	0.02	

#34: SEQ-CCB2



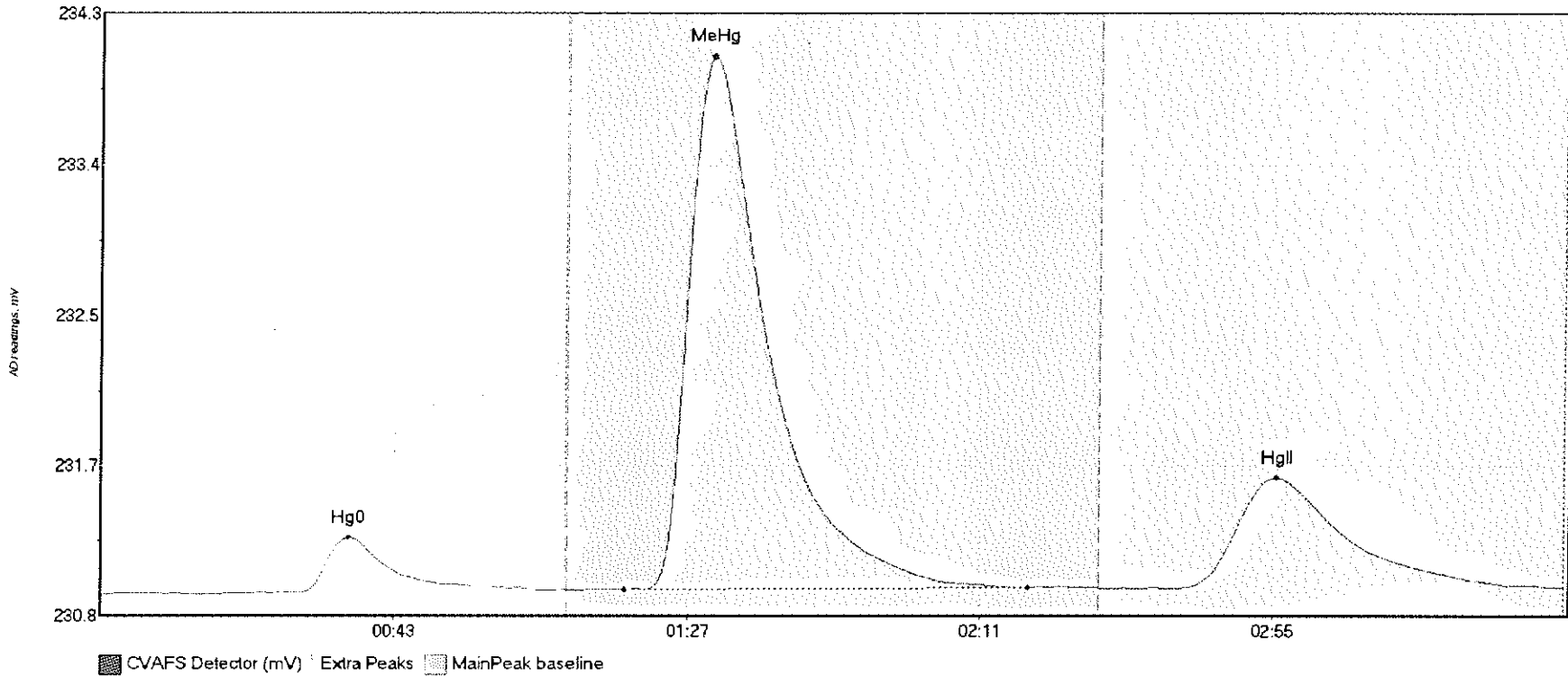
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB2 Hg0	25.808	3.2	67.4	230.93	230.94	37.1	0.183	OK	230.9243	0.00	0.03	
SEQ-CCB2 MeHg	6.478	84.3	117.2	230.94	230.94	93.1	0.040	OK	230.9243	0.00	0.03	
SEQ-CCB2 HgII	18.395	164.9	207.9	230.95	230.95	176.2	0.099	OK	230.9243	0.00	0.03	

#35: 1611249-08



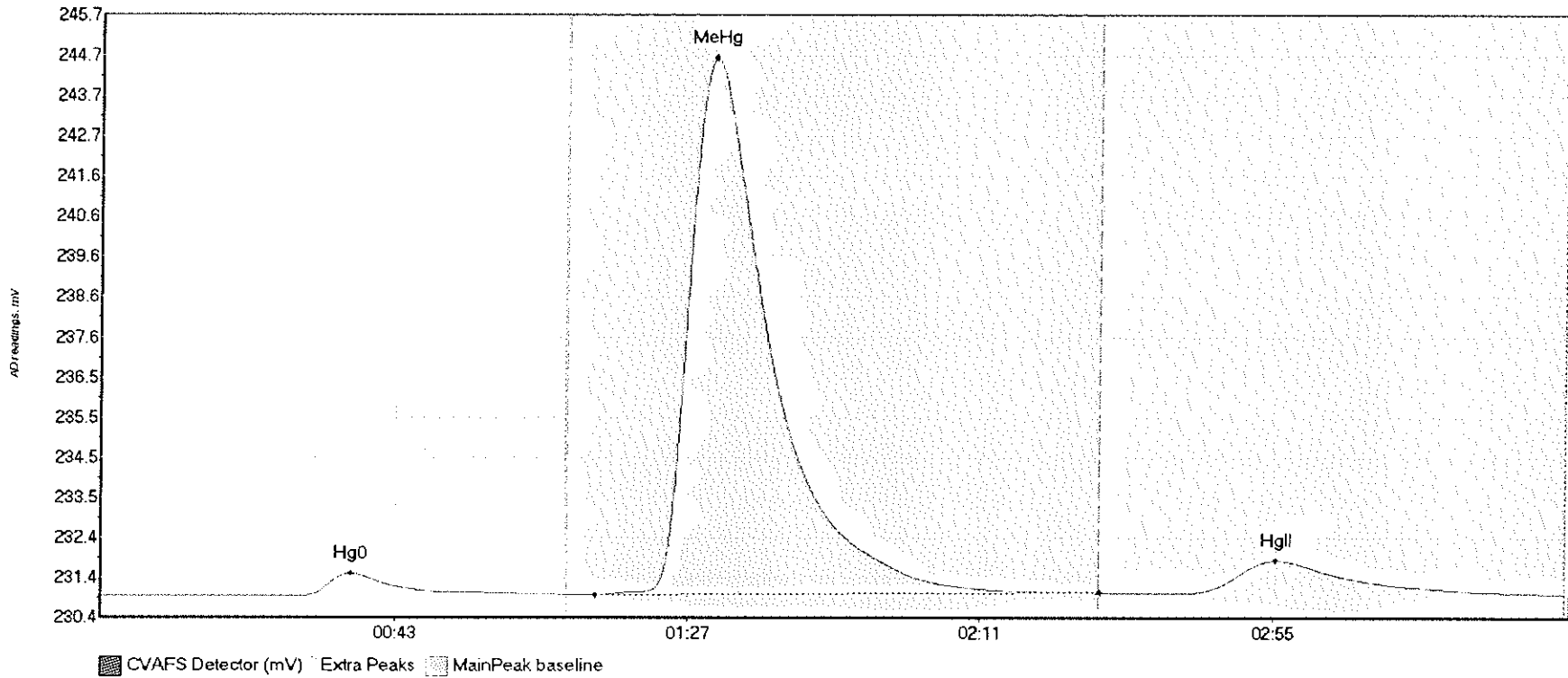
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-08 Hg0	41.194	27.8	69.9	230.95	230.97	37.1	0.398	CT	230.9466	0.00	0.04	
1611249-08 MeHg	553.866	81.1	148.6	230.97	230.98	91.6	4.017	OK	230.9466	0.00	0.04	
1611249-08 HgII	220.327	161.3	218.9	230.97	230.98	176.1	1.178	OK	230.9466	0.00	0.04	

#36: 1611249-09



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611249-09 Hg0	35.974	16.9	67.9	230.94	230.96	37.2	0.324	OK	230.9395	0.00	0.04	
1611249-09 MeHg	422.413	78.6	139.2	230.97	230.98	91.8	3.043	OK	230.9395	0.00	0.04	
1611249-09 HgII	118.100	162.3	218.1	230.98	230.98	176.6	0.630	OK	230.9395	0.00	0.04	

#37: 1611323-01

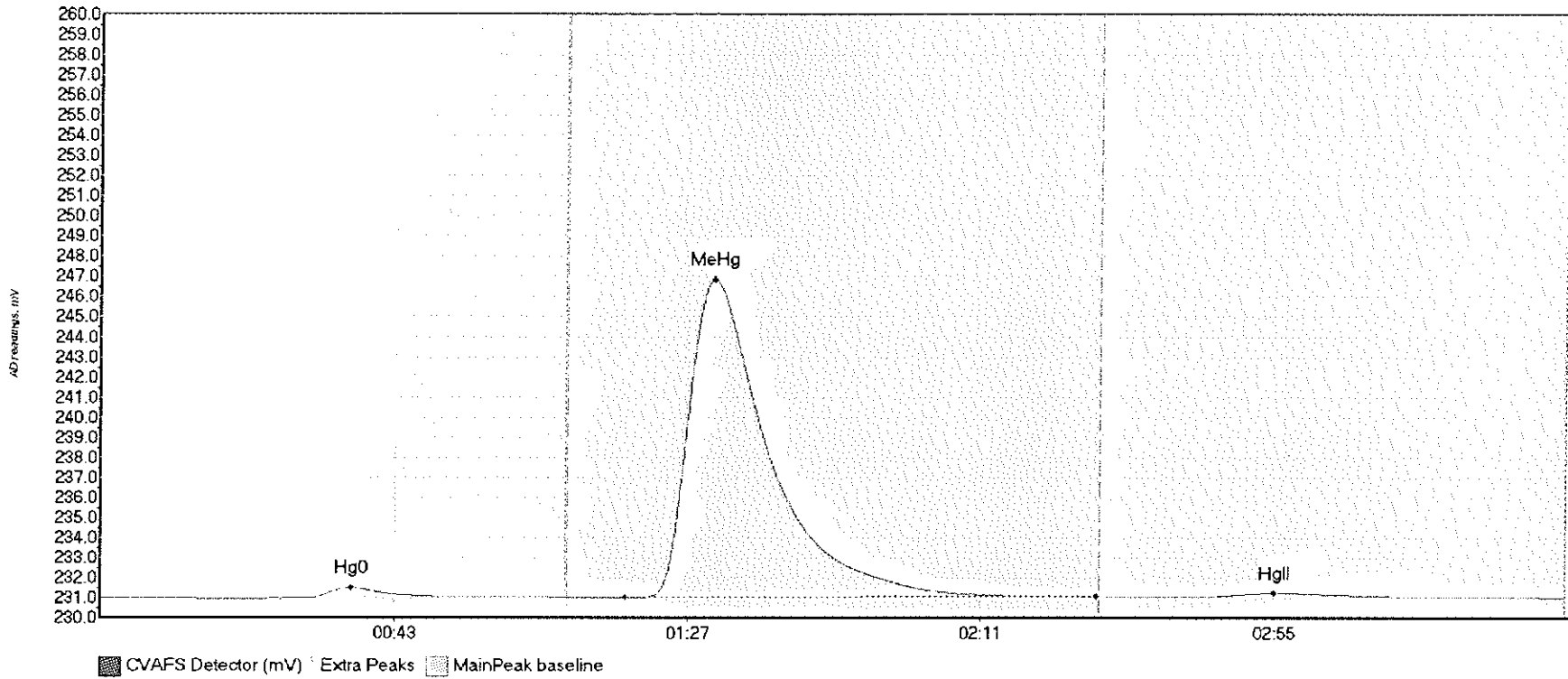


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Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-01 Hg0	65.183	26.6	69.9	230.96	230.99	37.5	0.573	CT	230.9557	0.00	0.06	
1611323-01 MeHg	1918.869	74.3	150.0	230.98	231.04	91.9	13.647	CT	230.9557	0.00	0.06	
1611323-01 HgII	148.957	162.2	210.1	231.03	231.04	176.5	0.832	OK	230.9557	0.00	0.06	

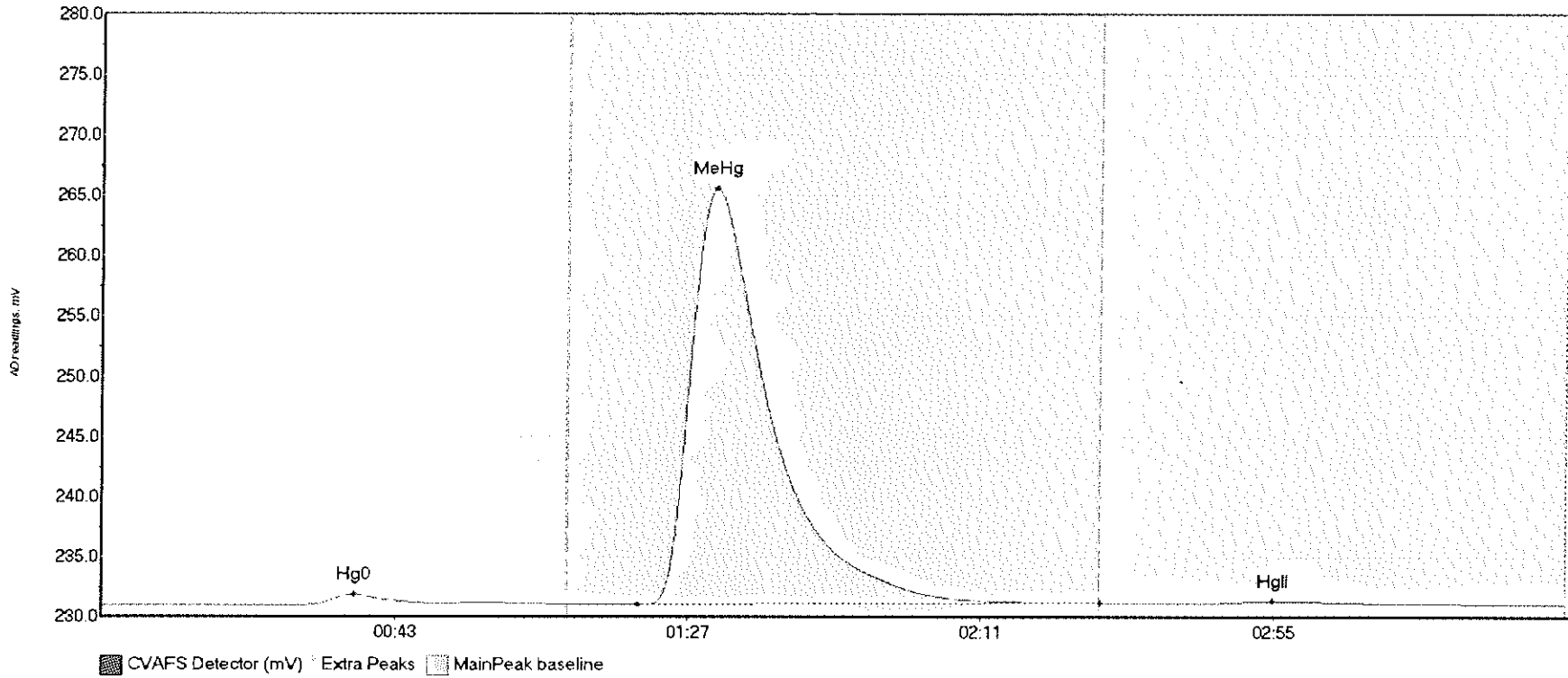


#38: 1611323-02



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-02 Hg0	55.816	30.1	69.9	230.98	231.01	37.6	0.514	CR	230.9768	0.00	0.04	
1611323-02 MeHg	2201.872	78.7	149.5	231.00	231.06	91.9	15.828	OK	230.9768	0.00	0.04	
1611323-02 HgII	32.209	162.6	198.3	231.03	231.04	176.1	0.203	OK	230.9768	0.00	0.04	

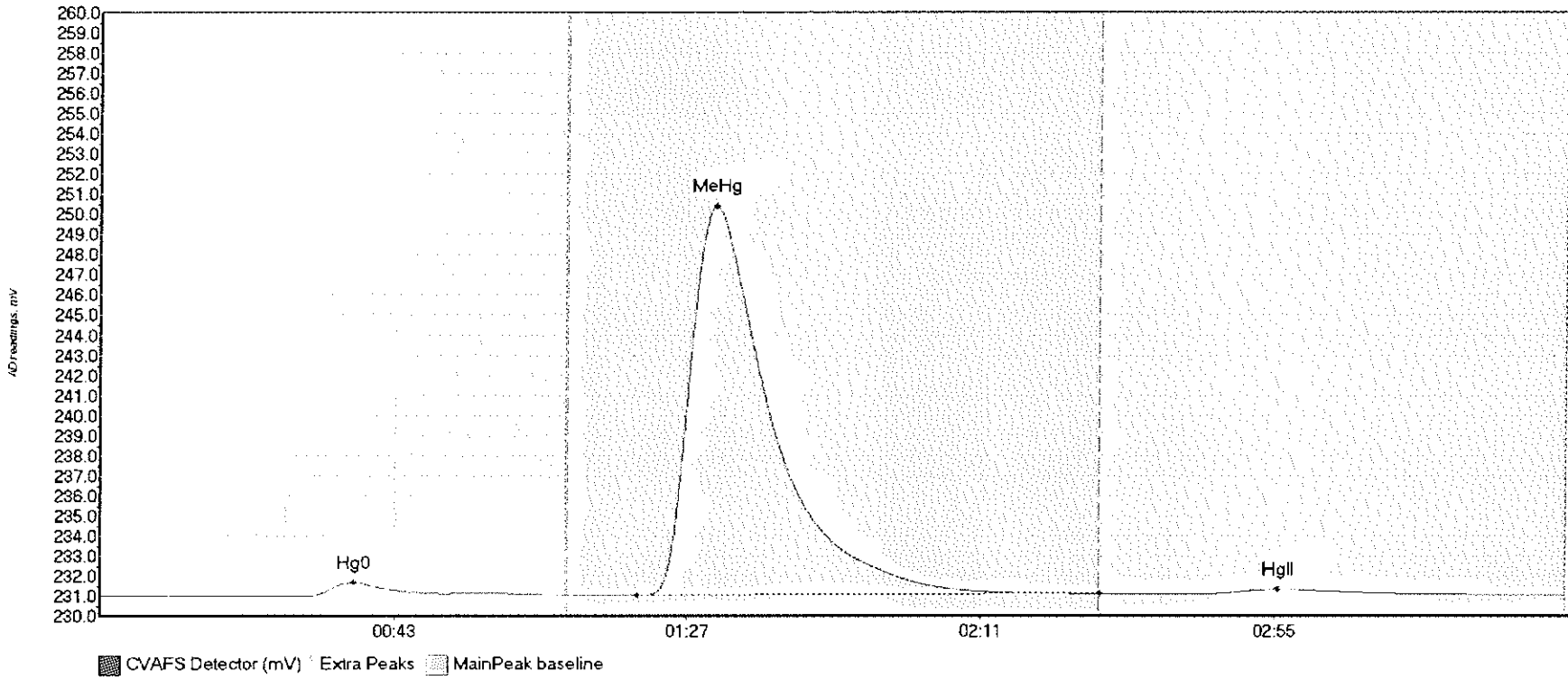
#39: 1611323-03



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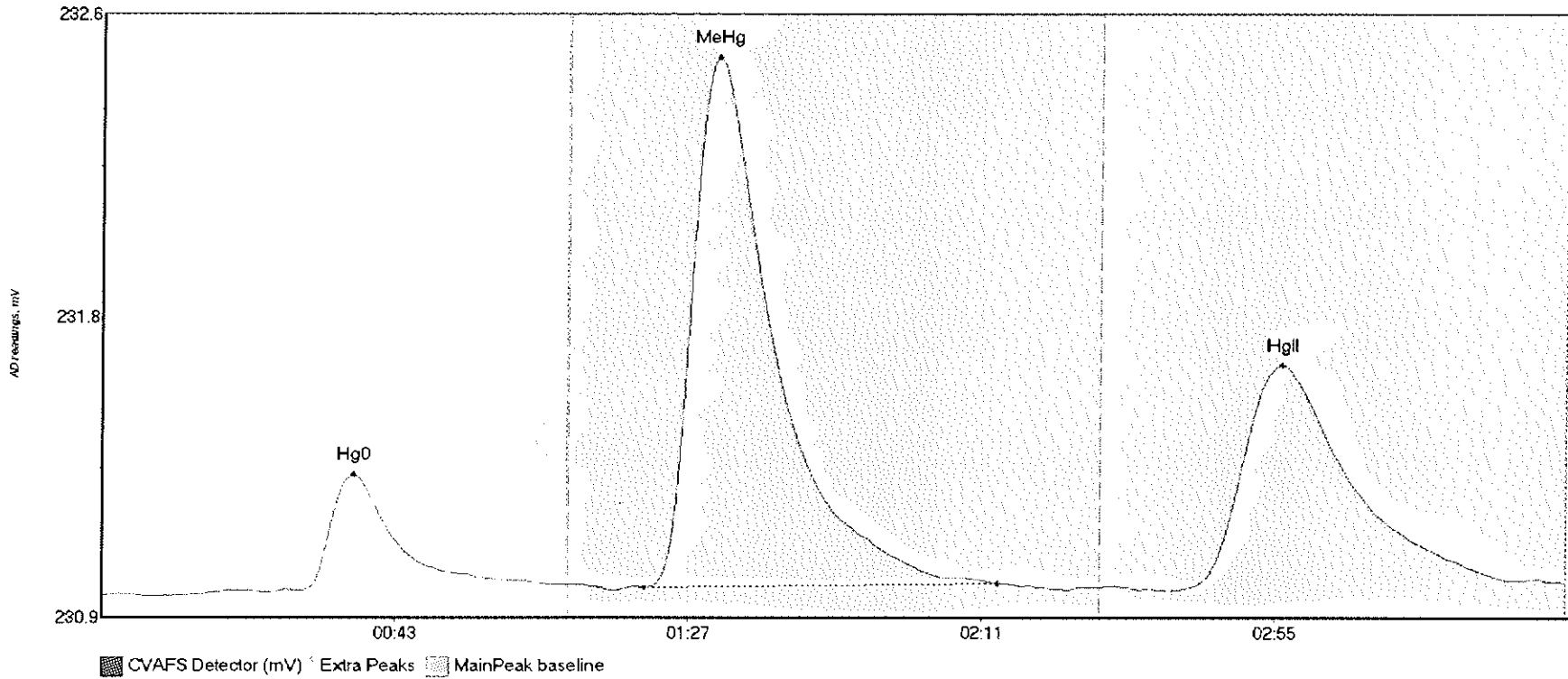
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-03 Hg0	95.063	24.3	69.9	230.98	231.04	37.9	0.872	CT	230.9730	0.00	0.08	
1611323-03 MeHg	4764.376	80.6	150.0	231.01	231.15	92.1	34.532	CT	230.9730	0.00	0.08	
1611323-03 HgII	29.456	163.5	195.8	231.11	231.10	175.9	0.195	CK	230.9730	0.00	0.08	

#40: 1611323-04



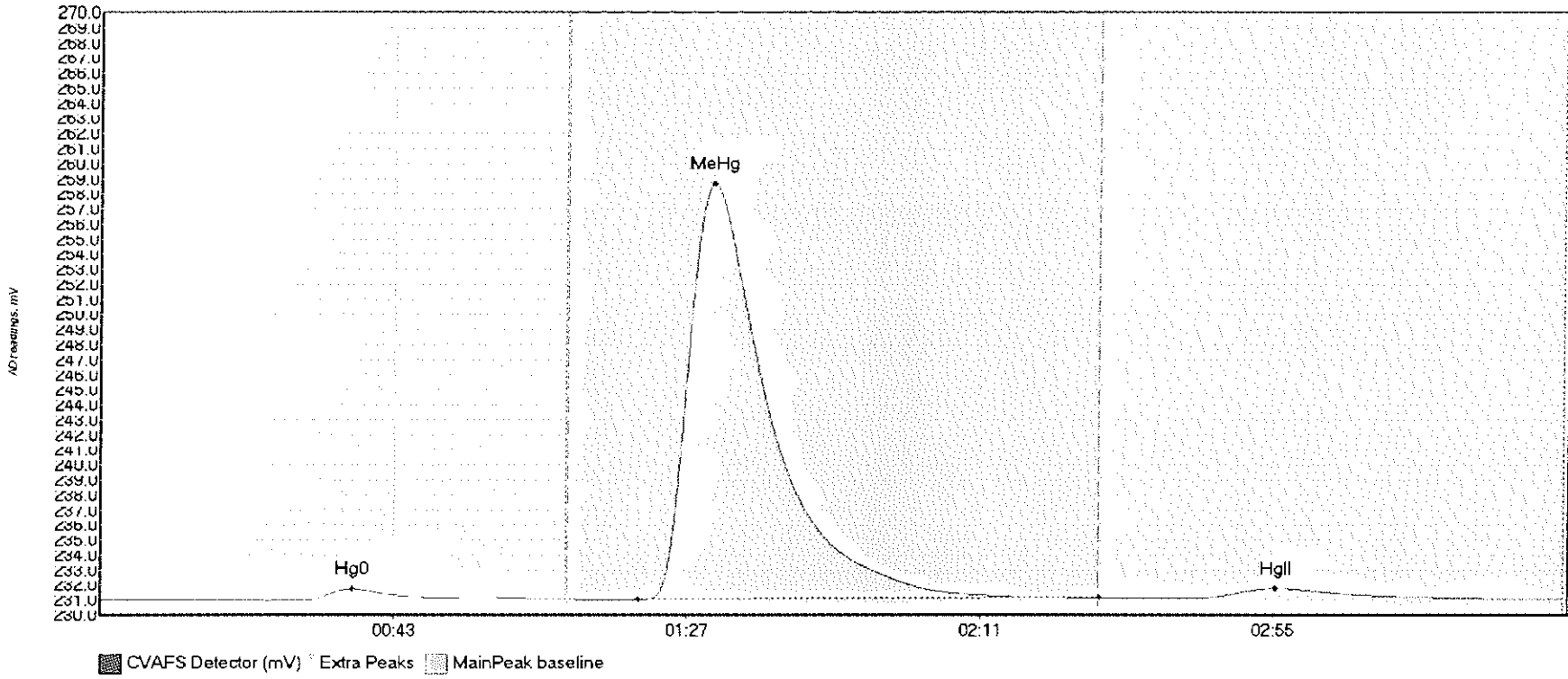
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BlShift	Comment
1611323-04 Hg0	77.258	30.0	69.9	230.99	231.05	38.0	0.669	CT	230.9869	0.00	0.06	
1611323-04 MeHg	2714.662	80.6	150.0	231.03	231.11	92.3	19.323	CT	230.9869	0.00	0.06	
1611323-04 HgII	39.293	163.6	200.0	231.08	231.09	176.6	0.247	OK	230.9869	0.00	0.06	

#41: 1611323-05



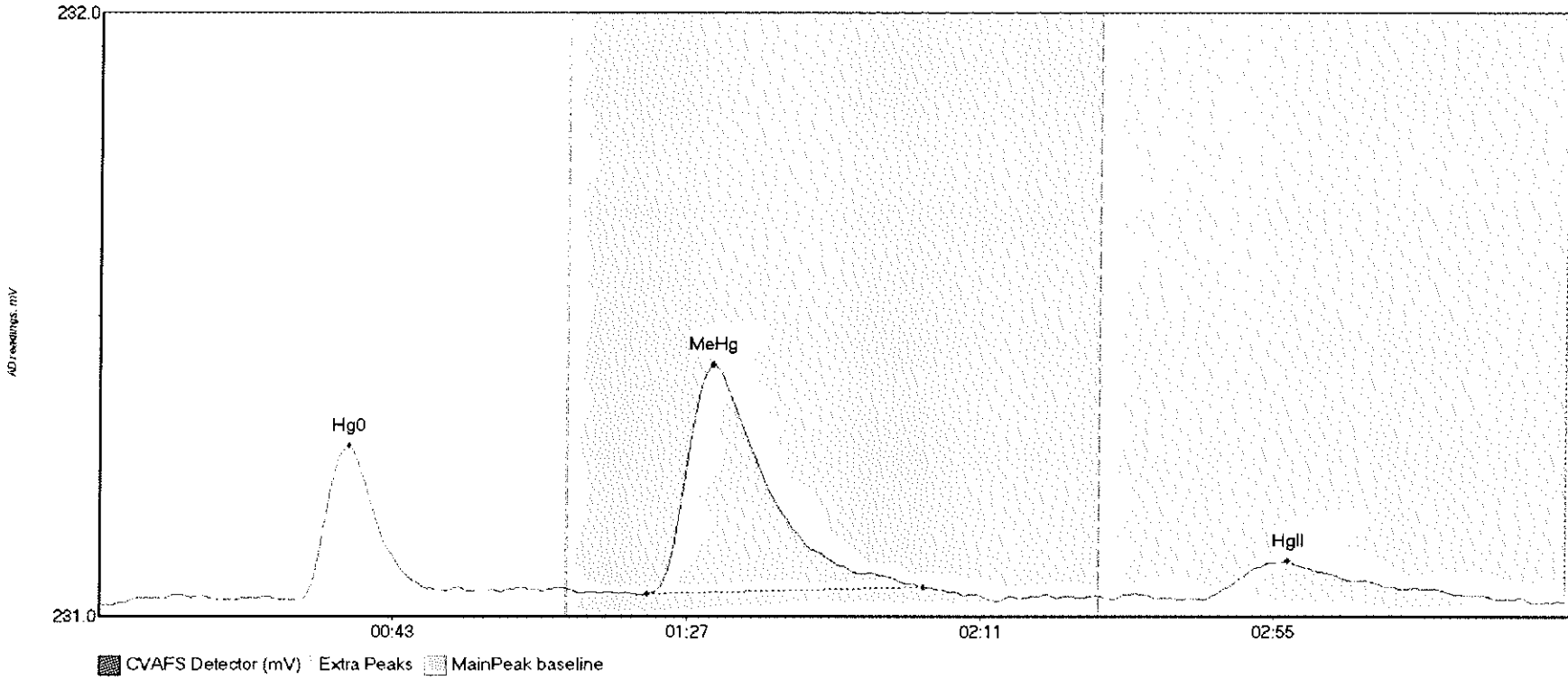
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-05 Hg0	37.112	14.7	68.8	230.99	231.02	37.9	0.338	OK	230.9921	0.00	0.04	
1611323-05 MeHg	211.043	81.4	134.5	231.01	231.02	92.3	1.499	OK	230.9921	0.00	0.04	
1611323-05 HgII	117.505	162.0	219.7	231.01	231.03	177.1	0.636	OK	230.9921	0.00	0.04	

#42: 1611323-06



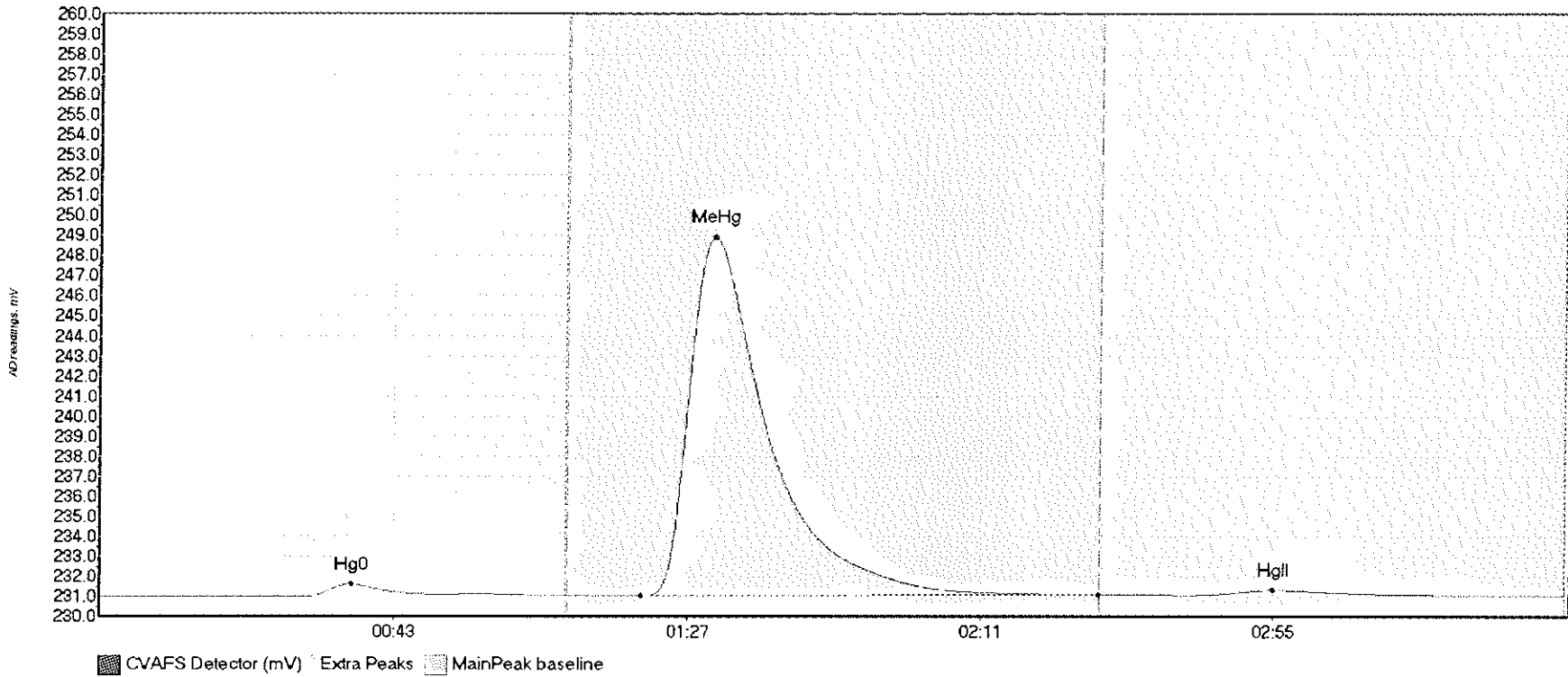
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-06 Hg0	90.098	30.2	69.9	230.99	231.06	37.8	0.745	CT	230.9874	0.00	0.09	
1611323-06 MeHg	3860.360	80.8	150.0	231.02	231.15	92.0	27.603	CT	230.9874	0.00	0.09	
1611323-06 HgII	114.540	163.1	208.9	231.12	231.10	176.5	0.651	OK	230.9874	0.00	0.09	

#43: 1611323-07



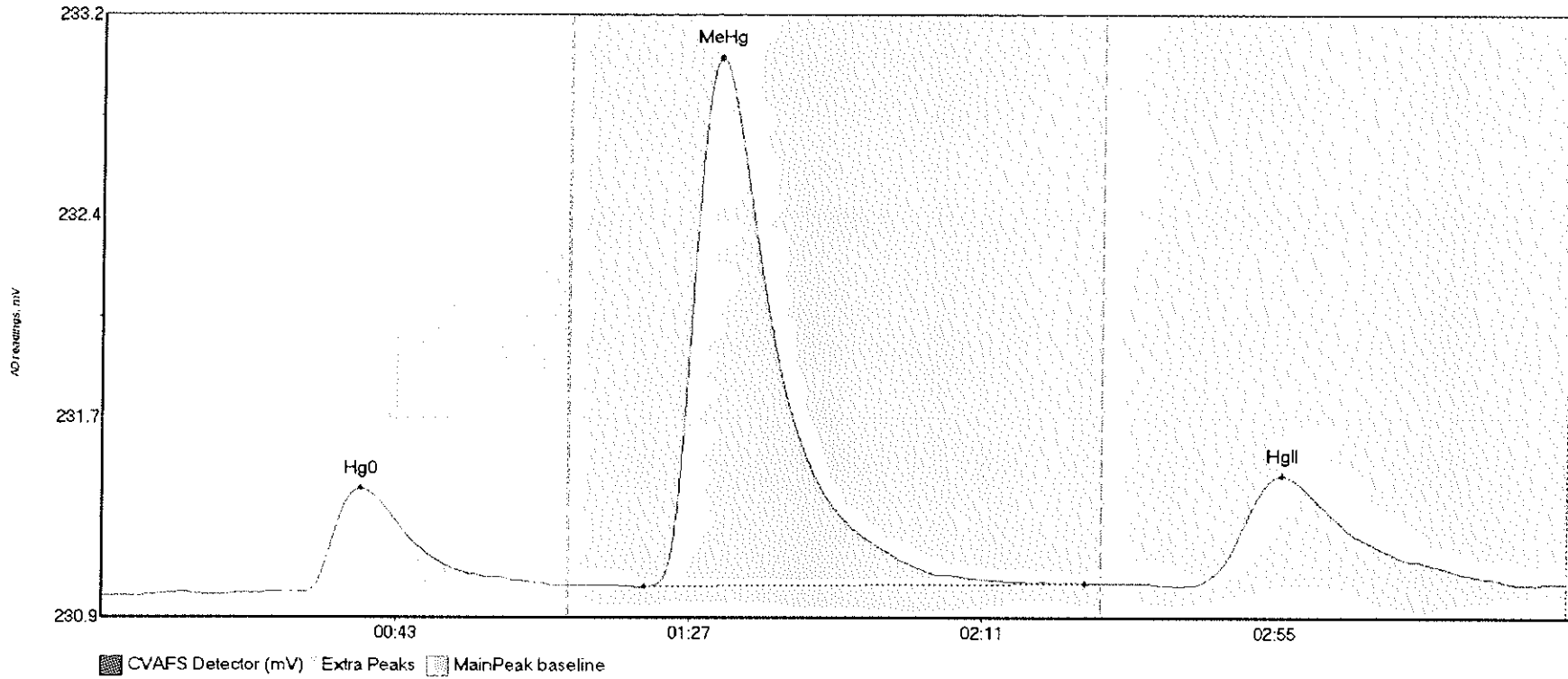
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-07 Hg0	23.734	1.9	60.1	231.00	231.02	37.4	0.265	OK	231.0003	0.00	0.01	
1611323-07 MeHg	52.116	82.0	123.5	231.02	231.03	91.9	0.380	OK	231.0003	0.00	0.01	
1611323-07 HgII	10.914	165.7	203.4	231.01	231.02	178.2	0.064	OK	231.0003	0.00	0.01	

#44: 1611323-08



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-08 Hg0	67.047	29.0	69.6	230.99	231.04	37.7	0.611	OK	231.0000	0.00	0.04	
1611323-08 MeHg	2459.599	81.0	149.7	231.03	231.09	92.0	17.866	OK	231.0000	0.60	0.04	
1611323-08 HgII	41.716	164.1	202.7	231.07	231.06	176.1	0.250	OK	231.0000	0.60	0.04	

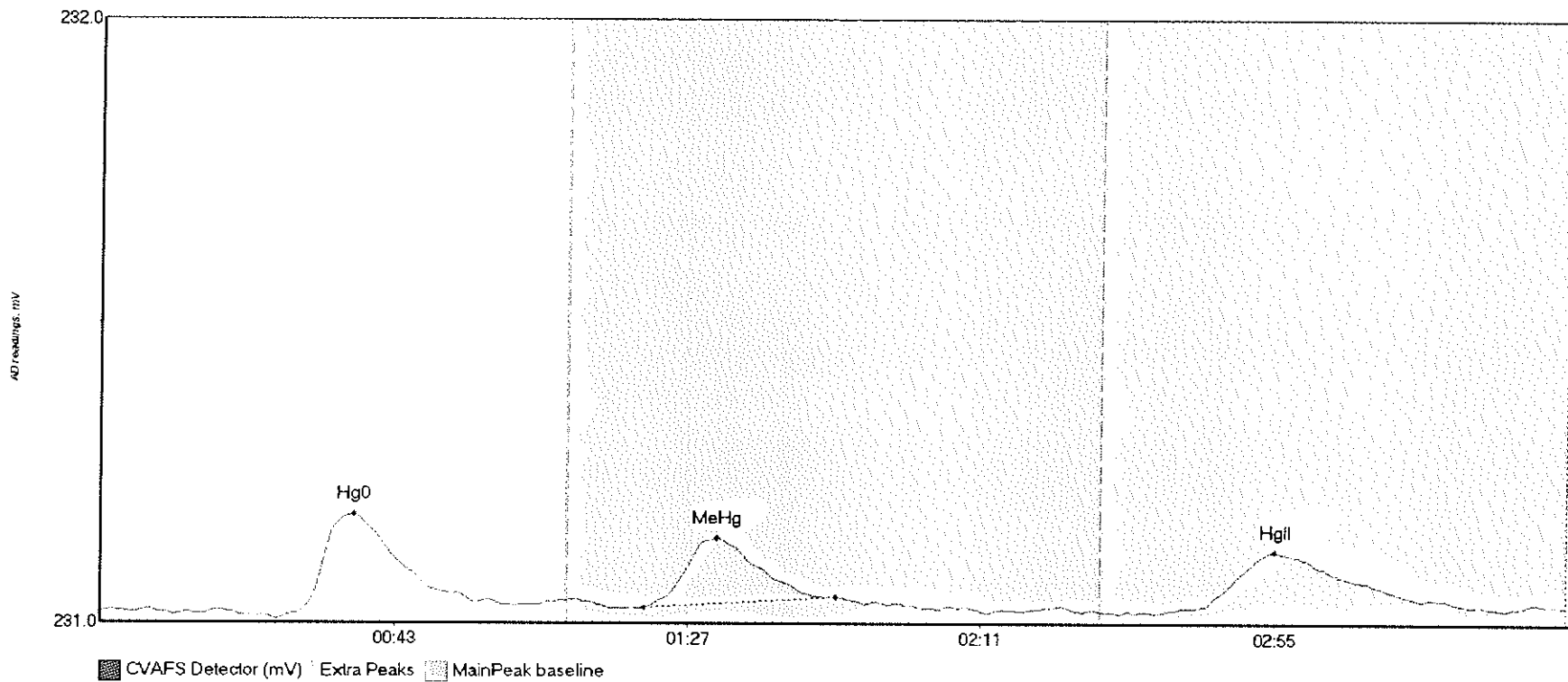
#45: SEQ-CCV3



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BlShift	Comment
SEQ-CCV3 Hg0	54.109	17.8	67.6	230.99	231.03	38.7	0.410	OK	230.9900	0.00	0.05	
SEQ-CCV3 MeHg	291.246	81.3	147.5	231.03	231.04	92.5	2.031	OK	230.9900	0.00	0.05	
SEQ-CCV3 HgII	79.311	163.3	212.7	231.03	231.03	177.0	0.423	OK	230.9900	0.00	0.05	

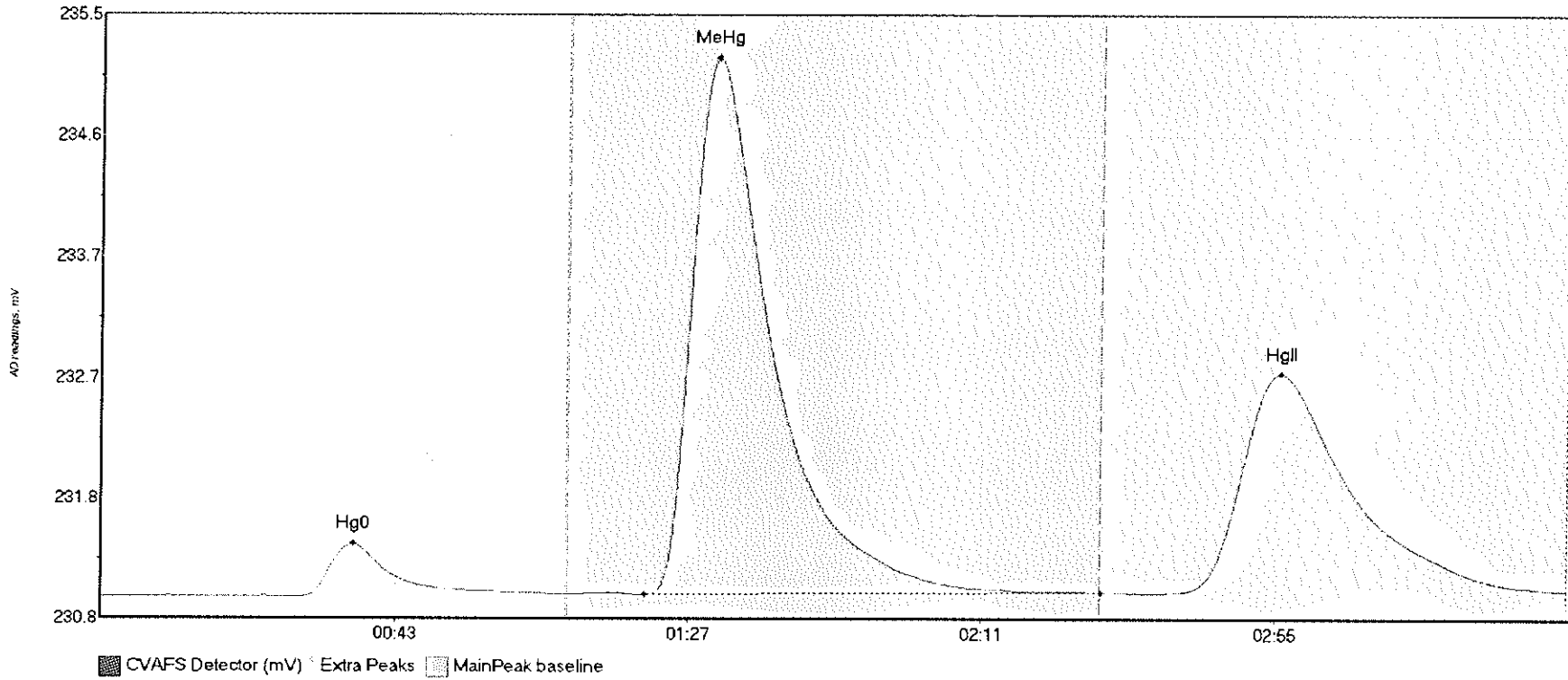


#46: SEQ-CCB3



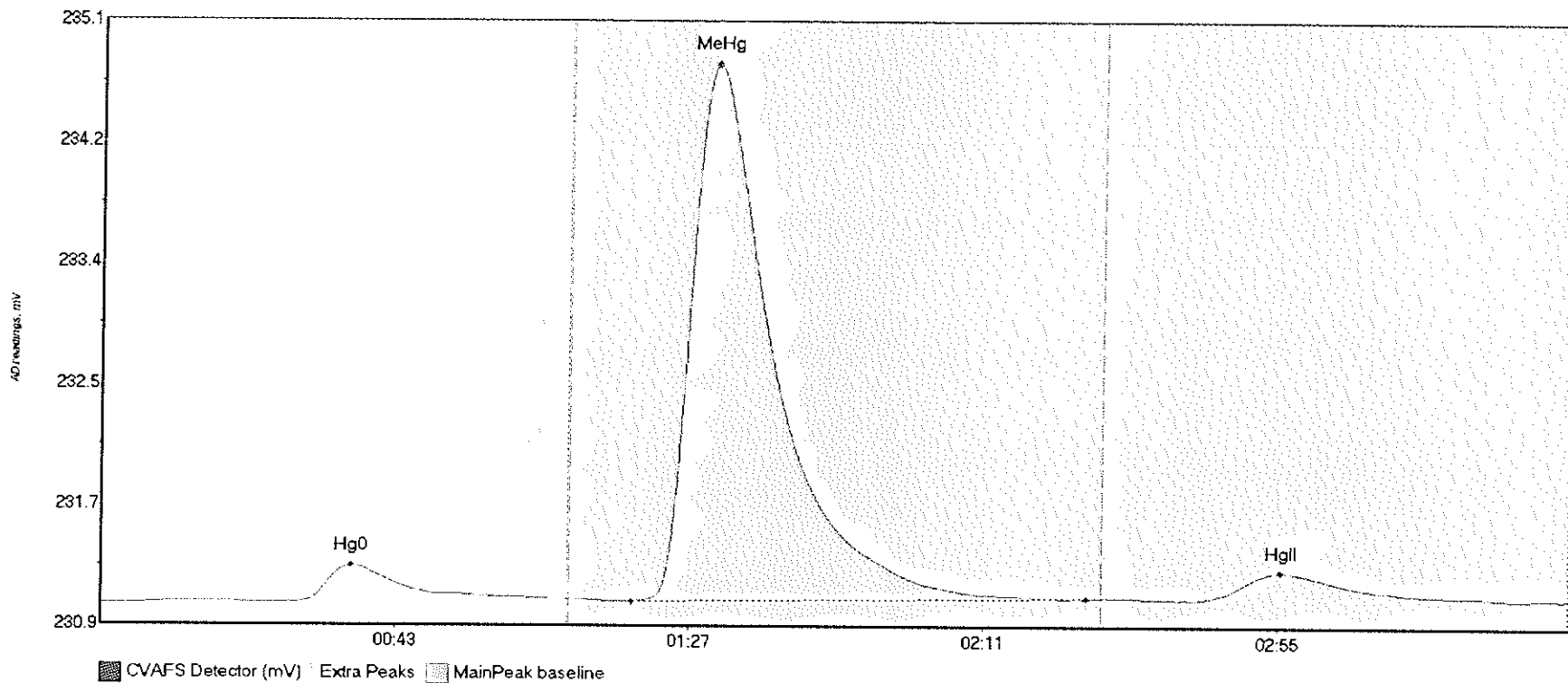
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB3 Hg0	20.731	29.0	62.0	231.01	231.03	37.8	0.165	OK	231.0168	0.00	0.01	
SEQ-CCB3 MeHg	13.327	81.5	110.2	231.02	231.04	92.3	0.315	OK	231.0168	0.00	0.01	
SEQ-CCB3 HgII	19.164	161.4	210.5	231.02	231.02	176.0	0.096	OK	231.0168	0.00	0.01	

#47: F612292-DUP1



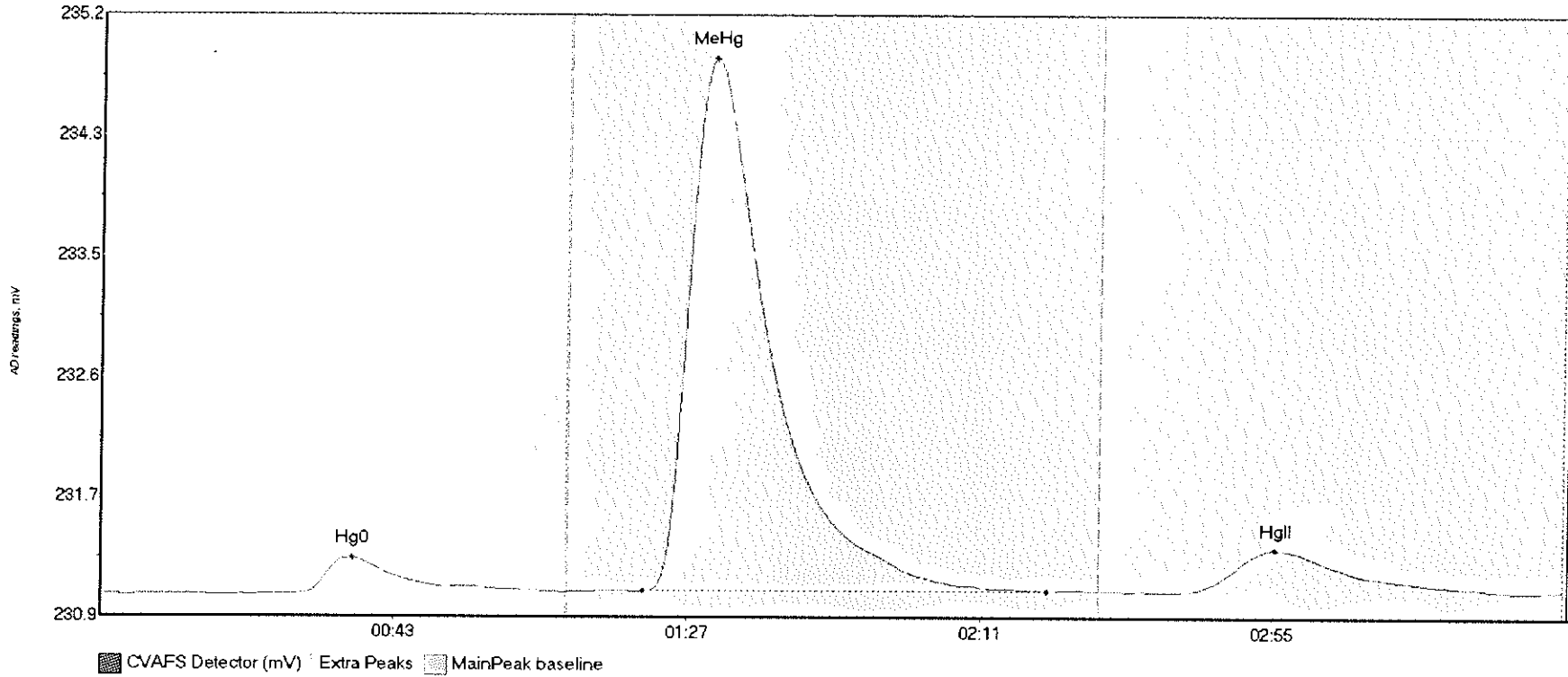
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	StDev	StShift	Comment
F612292-DUP1 Hg	42.610	29.4	68.3	231.00	231.03	37.7	0.414	OK	231.0045	0.00	0.05	
F612292-DUP1 Me	580.958	81.6	150.0	231.02	231.04	92.2	4.179	CT	231.0045	0.00	0.05	
F612292-DUP1 Hg	318.387	160.9	219.8	231.04	231.06	176.7	1.709	CT	231.0045	0.00	0.05	

#48: F612292-MS1



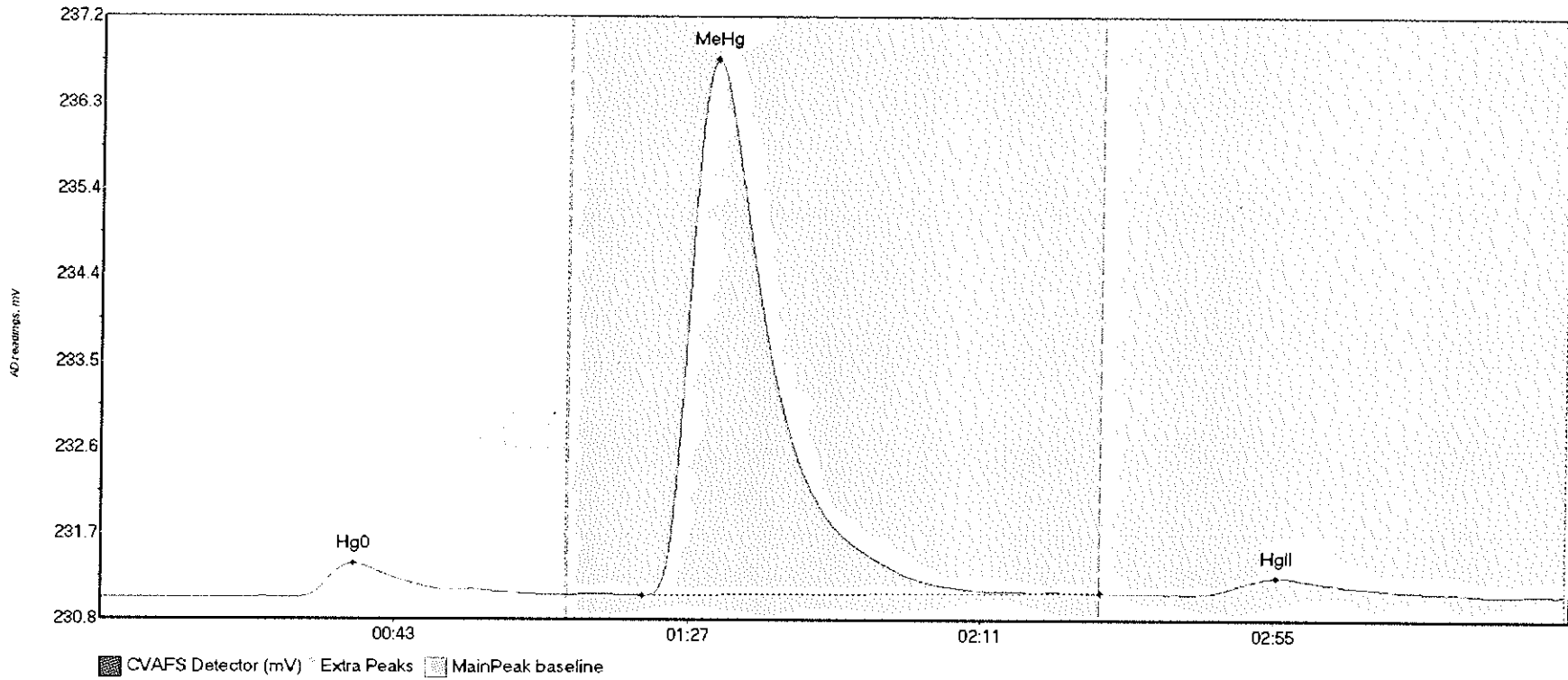
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-MS1 Hg0	32.193	25.7	69.9	231.01	231.04	37.5	0.261	CT	231.0065	0.00	0.04	
F612292-MS1 MeH	533.082	79.4	147.6	231.03	231.05	91.9	3.752	OK	231.0065	0.00	0.04	
F612292-MS1 HgI	33.942	163.8	209.4	231.04	231.05	176.5	0.197	OK	231.0065	0.00	0.04	

#49: F612292-MSD1



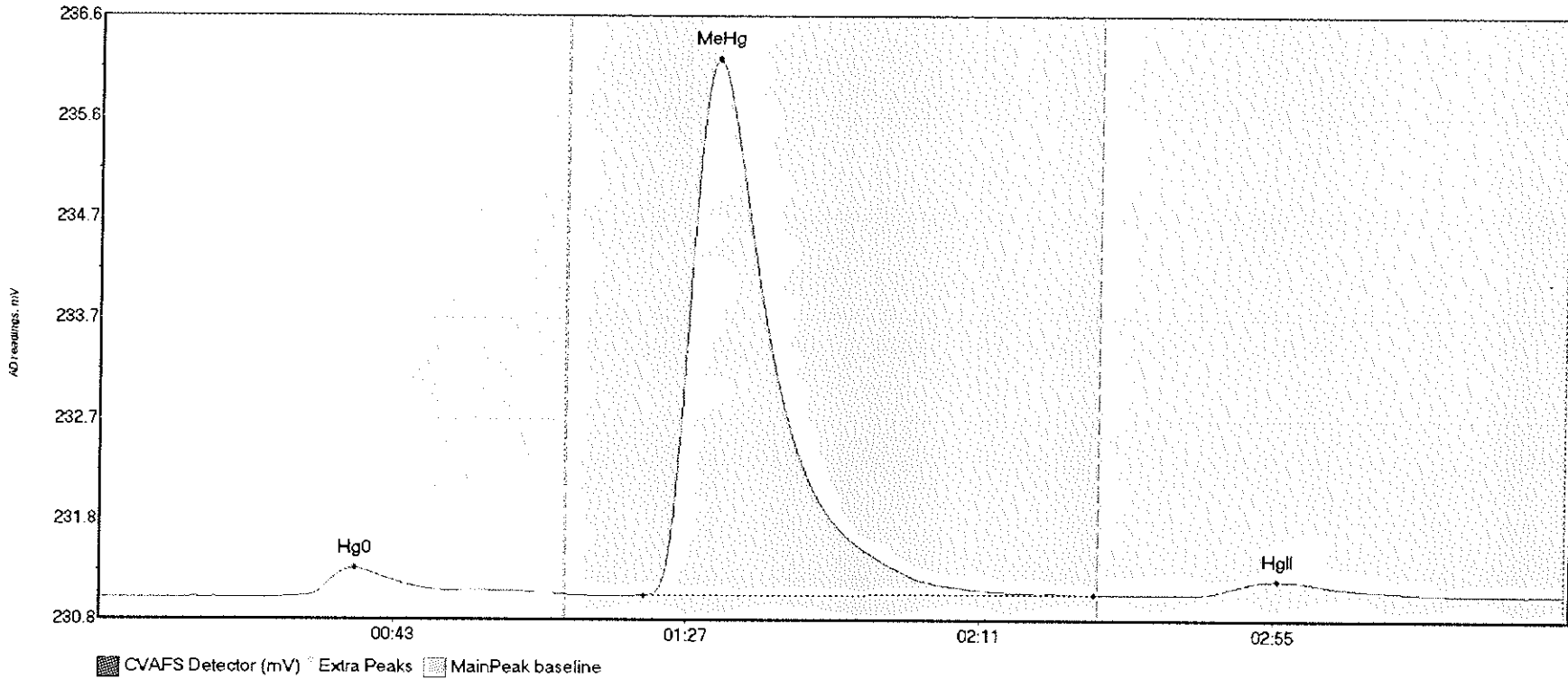
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-MSD1 Hg	33.163	26.6	69.3	231.02	231.04	37.8	0.262	OK	231.0219	0.00	0.03	
F612292-MSD1 Me	541.869	81.5	142.0	231.05	231.05	91.9	3.840	OK	231.0219	0.00	0.03	
F612292-MSD1 Hg	57.064	163.1	210.8	231.05	231.05	176.4	0.304	OK	231.0219	0.00	0.03	

#50: F612292-MS2



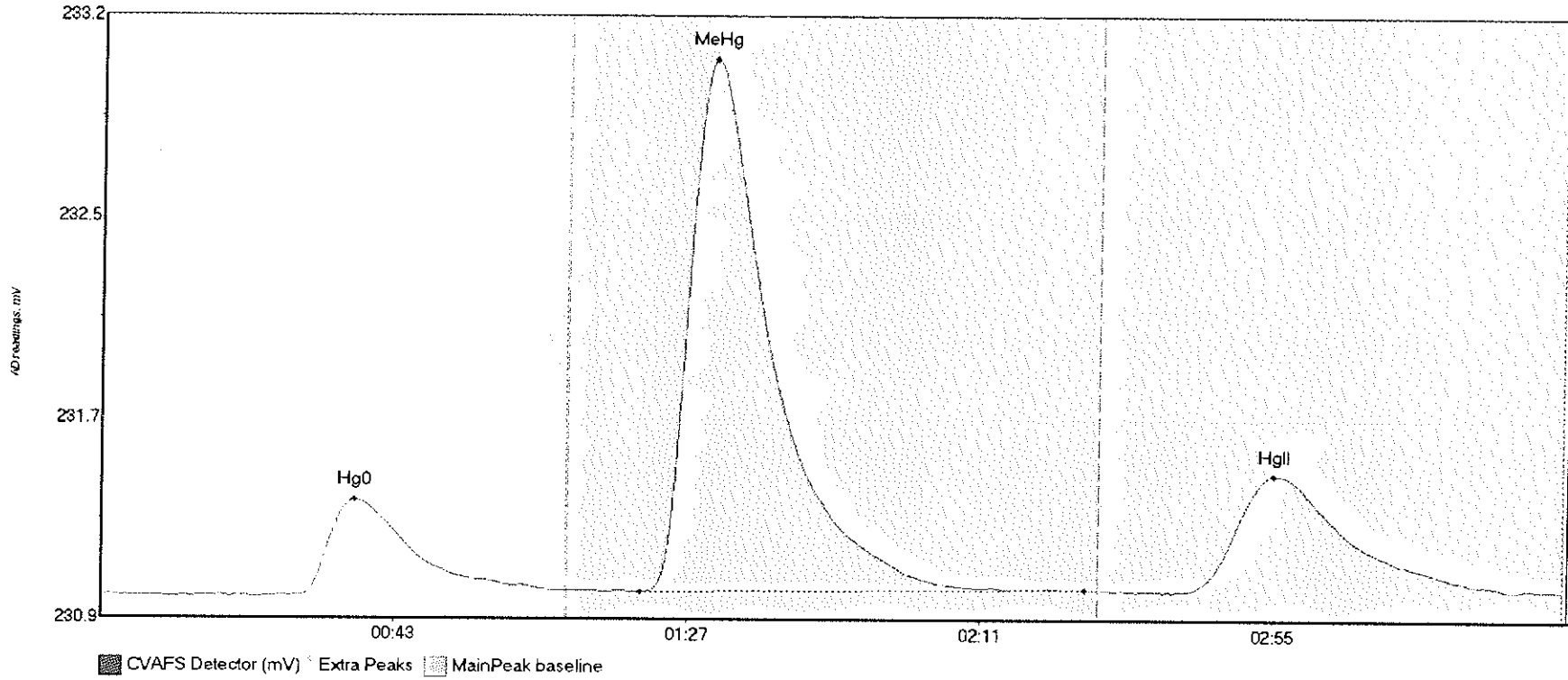
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-MS2 Hg0	46.759	29.0	67.6	231.02	231.05	37.8	0.354	OK	231.0196	0.00	0.03	
F612292-MS2 MeH	797.120	81.2	150.0	231.04	231.07	91.9	5.682	CT	231.0196	0.00	0.03	
F612292-MS2 HgI	33.264	163.0	207.2	231.06	231.05	176.5	0.178	OK	231.0196	0.00	0.03	

#51: F612292-MSD2



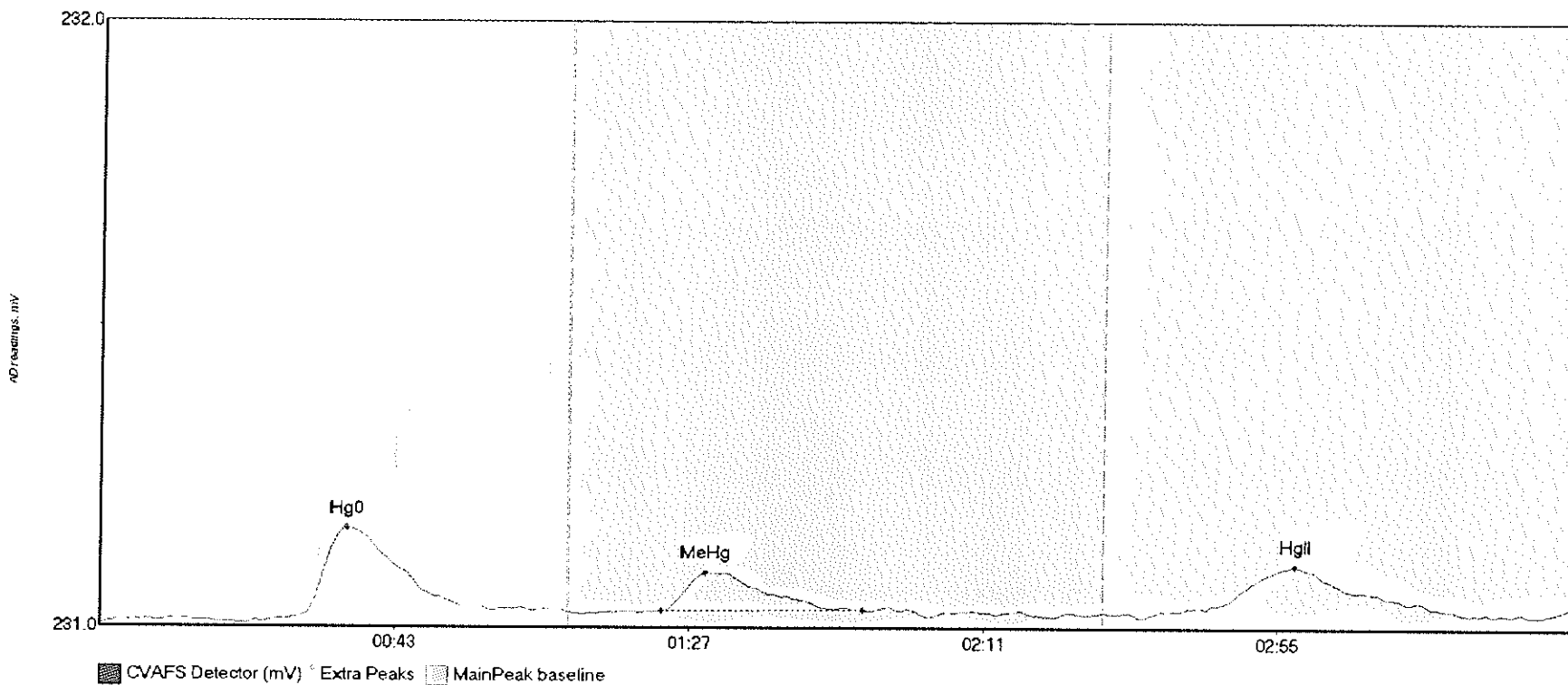
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-MSD2 Hg	36.940	26.2	69.9	231.02	231.06	38.3	0.283	CT	231.0206	0.00	0.04	
F612292-MSD2 Me	723.860	81.7	149.3	231.05	231.06	92.4	5.117	OK	231.0206	0.00	0.04	
F612292-MSD2 Hg	22.895	163.4	200.9	231.06	231.07	176.8	0.136	OK	231.0206	0.00	0.04	

#52: SEQ-CCV4



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV4 Hg0	50.148	30.1	69.8	231.03	231.04	38.2	0.364	OK	231.0268	0.00	0.02	
SEQ-CCV4 MeHg	287.467	81.0	147.9	231.04	231.05	91.9	2.033	OK	231.0268	0.00	0.02	
SEQ-CCV4 HgII	83.789	162.4	212.4	231.04	231.05	176.0	0.446	OK	231.0268	0.00	0.02	

#53: SEQ-CCB4



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB4 Hg0	19.677	25.7	69.9	231.02	231.04	36.9	0.153	CF	231.0174	0.00	0.03	
SEQ-CCB4 MeHg	8.419	83.9	114.0	231.04	231.04	90.4	0.063	OK	231.0174	0.00	0.03	
SEQ-CCB4 HgII	13.765	161.3	203.9	231.04	231.03	178.6	0.074	OK	231.0174	0.00	0.03	



**Peer Review Check List for MHg for CV-GC-AFS (FGS-070) 2015 Rev 5 (08/06/2015)**

<b>Analyst:</b> Ryan Nelson	<b>Sequence #:</b> 6L07016
<b>Reviewer:</b> <i>[Signature]</i> 12/8/16	<b>Dataset ID #:</b> MMHg27001-161207-1
<b>Date:</b> 12/7/16	<b>WO #:</b> NA
<b>Batch #(s):</b> F612262, F612292	<b>Client(s):</b> NA

• Select the correct preparation method.

Additional Comments:

Analyte	Prep Method	Matrix
<input type="checkbox"/> MHg	SOP2797 MHg Distillation	Water
<input type="checkbox"/> MHg	SOP2986 KOH/MeOH Digest	Tissue
<input type="checkbox"/> MHg	SOP5134 MeCl Extraction	Sed/Soil
<input type="checkbox"/> DMHg	SOP2816 (None Accredited method)	ALL

**Analyst Initials:**

*R*

**Reviewer Initials:**

*DC*

- |   |   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
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| <p>1. Compare Sample ID with Bench sheet/Sequence/Raw Data (Have all samples been imported?)</p> <p>2. Check for transcription errors from Excel spreadsheet (or Prep Bench sheet)/Raw data</p> <p style="margin-left: 20px;">(a) Reviewer: 100% of peak heights checked</p> <p style="margin-left: 20px;">(b) Are there peak height errors?</p> <p style="margin-left: 20px;">(c) Error on a sample: Do peak heights, responses, &amp; initial results match corrected data?</p> <p style="margin-left: 20px;">(d) Error on a Cal Pt, ICB/CCB, or PB: Has the data been reimported?</p> <p style="margin-left: 20px;">(e) Check standards &amp; reagents in sequence &amp; bench sheet for correct usage (i.e. expiries).</p> <p style="margin-left: 20px;">(f) Check and compare masses (review prep bench sheet)</p> <p style="margin-left: 20px;">(g) Check and compare initial and final volumes</p> <p style="margin-left: 20px;">(h) Do aliquots and dilutions written on benchsheet match those in Excel?</p> <p style="margin-left: 20px;">(i) Is the pH&gt;3.0 for all distilled samples? _____</p> <p style="margin-left: 20px;">(j) Is the sequence #, analyst, date, and instrument # on the QC page?</p> <p style="margin-left: 20px;">(k) Is the analysis status correct? (analyzed/initial review/reviewed)</p> <p style="margin-left: 20px;">(l) Original prep bench sheet added to data package?</p> <p style="margin-left: 20px;">(m) Benchsheet prep date MUST match actual prep date (check if re-shot vs re-extract)</p> <p>3. High QA? WO#(s)/Client(s): _____</p> <p>4. Client specific QC? (if Yes, refer to Project Notes/LIMS)</p> <p style="margin-left: 20px;">(a) Have the QC requirements been met for all WO#s?</p> <p>5. 20 or fewer samples in batch? _____</p> <p style="margin-left: 20px;">(a) 3 PBs, 1 LCS/LCSD (or BS/BSD), 2 MS/MSD/MD per batch?</p> <p style="margin-left: 20px;">(b) 1 CCV and 1 CCB every 10 analytical runs? _____</p> | <table style="width:100%; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input type="checkbox"/> YES</td> <td><input checked="" type="checkbox"/> NO</td> </tr> <tr> <td><input type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input type="checkbox"/> YES</td> <td><input checked="" type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> </table> | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <table style="width:100%; 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| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/> YES  | <input checked="" type="checkbox"/> NO  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/> YES  | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/> YES  | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/> YES  | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/> YES  | <input checked="" type="checkbox"/> NO  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>  |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>   |   |                             |   |                             |   |                             |                              |  |                              |                             |                              |                             |   |                             |   |                             |   |                             |                              |                             |   |                             |   |                             |   |                             |                              |  |   |                             |   |                             |   |                             |   |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |                                     |                          |                                     |                          |                          |                                     |                          |                                     |                          |                                     |

**QA/QC Data Checked**

- |  |   |                                     |
|--|---|-------------------------------------|
| <p>6. The calibration curve included a minimum of 5 Standards</p> <p>Comments: _____</p> | <input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| <p>7. 1st Calibration Standard % Recoveries (65-135%)</p> <p>Comments: _____</p>         | <input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| <p>8. RSD CF (≤ 15%)</p> <p>Comments: _____</p>  | <input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL                              | <input checked="" type="checkbox"/> |

**Peer Review Check List for MHg for CV-GC-AFS (FGS-070) 2013 Rev 4 (08/22/2013)**

<b>Analyst:</b>	Ryan Nelson	<b>Sequence #:</b>	6L07016
<b>Reviewer:</b>	0 <i>BCCS</i> 12/8/16	<b>Dataset ID #:</b>	MMHg27001-161207-1
<b>Date:</b>	12/7/2016	<b>WO #:</b>	NA
<b>Batch #(s):</b>	F612262, F612292	<b>Client(s):</b>	NA

**Analyst Initials:** *RN*      **Reviewer Initials:** *BCCS*

- |  |  |  |   |
|--|--|--|---|
| 9. ICV % Recoveries 67-133%  | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 10. CCV % Recoveries 67-133%   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 11. Are the absolute value of the ICB and CCBs < PQL?  | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 12. LCS/LCSD/CRM/BS/BSD % Recoveries (70-130%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 13. LCS/LCSD or BS/BSD RPD (< 25%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 14. Water: Average of Preparation Blanks < 0.045 ng/L and standard deviation of 0.015 ng/L?  | <input type="checkbox"/> PASS            | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> |
| Comments: _____  |  |  |   |
| 15. Sediment/Tissue: Individually, are the Preparation Blanks < PQL for the matrix?          | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input type="checkbox"/> N/A <input checked="" type="checkbox"/>            |
| Comments: _____  | <input type="checkbox"/> PASS            | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| 16. Have Total Solids been applied? (If NO, please ensure that they are done or nearly done) | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO            | <input type="checkbox"/> N/A <input checked="" type="checkbox"/>            |
| 17. Is the correct 'Source' designated for MD/MS/MSD?  | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/>   |
| 18. For digested preps: was there a spike witness signature & date on the prep bench sheet?  | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO            | <input type="checkbox"/> N/A <input checked="" type="checkbox"/>            |
| 19. MD RPD/MT RSD (< 35%)  | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 20. Is there one set of MS/MSD per every 10 samples?   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 21. MS/MSD RPD (< 35%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 22. MS (AS) % Recoveries (65-130%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 23. MSD (ASD) % Recoveries (65-130%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL          | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 24. Spiked 1-5X ambient or 1-5X PQL (whichever is higher) (from EPA 1630)                    | <input checked="" type="checkbox"/> YES  | <input checked="" type="checkbox"/> NO | <input checked="" type="checkbox"/>   |
| 25. Are all samples within instrument calibration range (or at maximum aliquot size)?        | <input checked="" type="checkbox"/> YES  | <input checked="" type="checkbox"/> NO | <input checked="" type="checkbox"/>   |
| Comments: _____  |  |  |   |
| 26. For instrumental dilutions, is the dilution factor in excel correct?                     | <input type="checkbox"/> PASS            | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> |
| Is the sample volume, diluents, and final volume of the dilution noted on benchsheet?        | <input type="checkbox"/> PASS            | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> |
| 27. Dissolved < Total metals (if applicable)   | <input type="checkbox"/> PASS            | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> |
| Comments: _____  |  |  |   |
| 28. Effluent < Influent metals (visually confirm if needed)                                  | <input type="checkbox"/> PASS            | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> |
| Comments: _____  |  |  |   |

**Peer Review Check List for MHg for CV-GC-AFS (FGS-070) 2013 Rev 4 (08/22/2013)**

<b>Analyst:</b>	Ryan Nelson	<b>Sequence #:</b>	6L07016
<b>Reviewer:</b>	0 <i>BC</i> 12/19/16	<b>Dataset ID #:</b>	MMHg27001-161207-1
<b>Date:</b>	12/7/2016	<b>WO #:</b>	NA
<b>Batch #(s):</b>	F612262, F612292	<b>Client(s):</b>	NA

**Analyst Initials:** *RN*      **Reviewer Initials:** *BC*

29. Are re-runs noted with reason?  YES    NO    N/A     
 Comments: \_\_\_\_\_
30. For failing QC (CCV, CCB, PB, BS/BSD, CAL):  YES    NO    N/A     
 Was a bubbler and trap test run before the analytical run continued?  
 Comments: \_\_\_\_\_
31. Do re-run results compare to initial analysis (< 35% RPD)?  YES    NO    N/A     
 Comments: \_\_\_\_\_
32. Are qualifiers consistent with the data review flowcharts?  YES    NO    N/A     
 Comments: \_\_\_\_\_
33. Have non-reportable samples been imported into LIMS and clicked to non-reportable?  YES    NO    N/A     
 Comments: \_\_\_\_\_
34. Have re-extracts been created for non-reportable samples?  YES    NO    N/A
35. Narrations in MMO box in LIMS?  
 Comments: \_\_\_\_\_
36. Are there any HIGH QA projects within the data?  YES    NO  
 If so, place dataset to the QA office.
37. Does the data set need scanning?  YES    NO    N/A
- Files located at:** \\Cuprum\gen\_admin\Quality Assurance\Training Master\IDOCs
38. Date of analyst IDOC/CDOC: 2/22/2016 IDOC/CDOC within last 12 months?  YES    NO    N/A
39. Date of analyst's SOP reading: 6/8/2016 Current SOP revision?  YES    NO    N/A
40. Date of LOD: 7/8/2016 LOD within last 3 months (within 12 months for MDN)?  YES    NO    N/A
41. Date of LOQ: 7/8/2016 LOQ within last 3 months (within 12 months for MDN)?  YES    NO    N/A
42. If MDN samples, date of last MDL study: \_\_\_\_\_
43. MDL study within last 12 months?  YES    NO    N/A
- Data can not be reported without a current IDOC/CDOC, LOD or LOQ.**
- Additional Comments:  YES    NO

**THg26002-161206-1**



Frontier Global Sciences

**Analysis Datasheet for Total Mercury**

Date of Analysis: December 06, 2016  
 Instrument #: Hg2600-2  
 LIMS Sequence #: 6L07020, 6L07019

Analyst: DM2  
 Units ng/L

**Calibration Statistics:**

LabNumber	n	True Val	Area	Uncorrected Response Factor	Corrected Peak Height	Corrected Response Factor	% Recovery
SEQ-CAL1	1	0.50 ng/L	137.91 units	275.81	122.39 units	244.77	99.8 %Rec
SEQ-CAL2	1	1.00 ng/L	260.23 units	260.23	244.71 units	244.71	99.7 %Rec
SEQ-CAL3	1	5.00 ng/L	1246.93 units	249.39	1231.41 units	246.28	100.4 %Rec
SEQ-CAL4	1	20.00 ng/L	4855.40 units	242.77	4839.88 units	241.99	98.6 %Rec
SEQ-CAL5	1	40.00 ng/L	9981.95 units	249.55	9966.43 units	249.16	101.5 %Rec
SEQ-CAL6	0						
SEQ-CAL7	0						
SEQ-CAL8	0						
SEQ-CAL9	0						

Corr. Mean RF    Corr. St Dev RF    Corr. RSD CF    Uncorr. Mean RF  
 245.38            +/- 2.62            1.1% RSD            255.55

**Blanks:**

LabNumber	n	Mean	Std Dev	Mean (ng/L)	Std Dev (ng/L)
SEQ-IBL	3	15.52 units	±0.74	0.06 ng/L	±0.00

**Preparation Blanks**

Sample Type	Batch ID	n	Mean	Std Dev
BLK	1	3	2.149 ng/L	±1.118
BLK	2	3	0.087 ng/L	±0.011
BLK	3	3	0.037 ng/L	±0.031
BLK	4	1	0.035 ng/L	
BLK	5	1	0.071 ng/L	
BLK	6	3	3.670 ng/L	±3.267

QUALITY ASSURANCE

PEER - REVIEWED

INITIALS:   A     12/8/16

Instrument	Analyst	Sample		Dilution	Analyzed	FileID	RunEnd	Uncorrected Response	Batch ID	Correction		InitialResult	FinalResult	InitialUnits	Comments
		Type	LabNumber							?	RESP				
Hg2600-2	DM2	CAL	SEQ-IBL1	1	12/6/2016 10:39:19	67243-1 RAW	10:39:19 AM	15.96			0.4	0.002	0.002	ng/L	
Hg2600-2	DM2	CAL	SEQ-IBL2	1	12/6/2016 10:43:28	67244-1 RAW	10:43:28 AM	14.67			-0.8	-0.003	-0.003	ng/L	
Hg2600-2	DM2	CAL	SEQ-IBL3	1	12/6/2016 10:47:36	67245-1 RAW	10:47:36 AM	15.93			0.4	0.002	0.002	ng/L	
Hg2600-2	DM2	CAL	SEQ-CAL1	1	12/6/2016 10:51:45	67246-1 RAW	10:51:45 AM	137.91			122.4	0.499	0.499	ng/L	
Hg2600-2	DM2	CAL	SEQ-CAL2	1	12/6/2016 10:55:53	67247-1 RAW	10:55:53 AM	260.23			244.7	0.997	0.997	ng/L	
Hg2600-2	DM2	CAL	SEQ-CAL3	1	12/6/2016 11:00:01	67248-1 RAW	11:00:01 AM	1246.93			1231.4	5.018	5.018	ng/L	
Hg2600-2	DM2	CAL	SEQ-CAL4	1	12/6/2016 11:04:10	67249-1 RAW	11:04:10 AM	4855.40			4839.9	19.724	19.724	ng/L	
Hg2600-2	DM2	CAL	SEQ-CAL5	1	12/6/2016 11:08:18	67250-1 RAW	11:08:18 AM	9981.95			9966.4	40.616	40.616	ng/L	
Hg2600-2	DM2	CAL	SEQ-ICV1	1	12/6/2016 11:12:27	67251-1 RAW	11:12:27 AM	1239.47			1223.9	4.988	4.988	ng/L	
Hg2600-2	DM2	BLK	F612277-BLK1	20	12/6/2016 11:16:35	67252-1 RAW	11:16:35 AM	57.22	1		41.7	0.170	3.399	ng/L	
Hg2600-2	DM2	BLK	F612277-BLK2	20	12/6/2016 11:20:44	67253-1 RAW	11:20:44 AM	37.66	1		22.1	0.090	1.805	ng/L	
Hg2600-2	DM2	BLK	F612277-BLK3	20	12/6/2016 11:24:52	67254-1 RAW	11:24:52 AM	30.78	1		15.3	0.062	1.244	ng/L	
Hg2600-2	DM2	SAM	F612277-BS1	20	12/6/2016 11:29:00	67255-1 RAW	11:29:00 AM	1295.12	1		1279.6	5.107	102.145	ng/L	
Hg2600-2	DM2	SAM	F612277-BSD1	20	12/6/2016 11:33:09	67256-1 RAW	11:33:09 AM	1312.21	1		1296.7	5.177	103.537	ng/L	
Hg2600-2	DM2	SAM	1611242-09	1000	12/6/2016 11:37:17	67257-1 RAW	11:37:17 AM	1352.62	1		1337.1	5.447	5446.855	ng/L	
Hg2600-2	DM2	SAM	1611325-01	1000	12/6/2016 11:41:26	67258-1 RAW	11:41:26 AM	1612.59	1		1597.1	6.506	6506.303	ng/L	
Hg2600-2	DM2	SAM	1611325-02	1000	12/6/2016 11:45:34	67259-1 RAW	11:45:34 AM	51.89	1		36.4	0.146	146.085	ng/L	
Hg2600-2	DM2	SAM	1611325-04	1000	12/6/2016 11:49:43	67260-1 RAW	11:49:43 AM	2537.97	1		2522.5	10.277	10277.462	ng/L	
Hg2600-2	DM2	SAM	1611325-05	1000	12/6/2016 11:53:51	67261-1 RAW	11:53:51 AM	2048.18	1		2032.7	8.281	8281.422	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV1	1	12/6/2016 11:57:59	67262-1 RAW	11:57:59 AM	1251.61			1236.1	5.037	5.037	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB1	1	12/6/2016 12:02:08	67263-1 RAW	12:02:08 PM	38.93			23.4	0.095	0.095	ng/L	
Hg2600-2	DM2	SAM	1611325-06	1000	12/6/2016 12:06:16	67264-1 RAW	12:06:16 PM	2982.91	1		2967.4	12.091	12090.674	ng/L	
Hg2600-2	DM2	SAM	1611326-01	1000	12/6/2016 12:10:25	67265-1 RAW	12:10:25 PM	2534.73	1		2519.2	10.264	10264.265	ng/L	
Hg2600-2	DM2	SAM	1611326-02	1000	12/6/2016 12:14:34	67266-1 RAW	12:14:34 PM	5015.50	1		5000.0	20.374	20374.000	ng/L	
Hg2600-2	DM2	SAM	1611326-03	1000	12/6/2016 12:18:42	67267-1 RAW	12:18:42 PM	3038.13	1		3022.6	12.316	12315.728	ng/L	
Hg2600-2	DM2	SAM	1611326-04	1000	12/6/2016 12:22:51	67268-1 RAW	12:22:51 PM	2691.98	1		2676.5	10.905	10905.059	ng/L	
Hg2600-2	DM2	SAM	1611326-05	1000	12/6/2016 12:26:59	67269-1 RAW	12:26:59 PM	1570.85	1		1555.3	6.336	6336.218	ng/L	
Hg2600-2	DM2	SAM	1611326-06	1000	12/6/2016 12:31:08	67270-1 RAW	12:31:08 PM	1667.05	1		1651.5	6.728	6728.242	ng/L	
Hg2600-2	DM2	SAM	1611326-07	1000	12/6/2016 12:35:16	67271-1 RAW	12:35:16 PM	1359.44	1		1343.9	5.475	5474.636	ng/L	
Hg2600-2	DM2	SAM	1611326-08	1000	12/6/2016 12:39:25	67272-1 RAW	12:39:25 PM	1937.20	1		1921.7	7.829	7829.153	ng/L	
Hg2600-2	DM2	SAM	1611392-08	1000	12/6/2016 12:43:33	67273-1 RAW	12:43:33 PM	1535.88	1		1520.4	6.194	6193.691	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV2	1	12/6/2016 12:47:41	67274-1 RAW	12:47:41 PM	1204.73			1189.2	4.846	4.846	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB2	1	12/6/2016 12:51:50	67275-1 RAW	12:51:50 PM	39.69			24.2	0.099	0.099	ng/L	
Hg2600-2	DM2	SAM	1611392-09	1000	12/6/2016 12:55:58	67276-1 RAW	12:55:58 PM	1568.15	1		1552.6	6.325	6325.216	ng/L	
Hg2600-2	DM2	SAM	1611392-10	1000	12/6/2016 13:00:07	67277-1 RAW	1:00:07 PM	2131.50	1		2116.0	8.621	8620.981	ng/L	
Hg2600-2	DM2	SAM	1611392-11	1000	12/6/2016 13:04:15	67278-1 RAW	1:04:15 PM	1868.69	1		1853.2	7.550	7549.965	ng/L	
Hg2600-2	DM2	SAM	1611392-12	1000	12/6/2016 13:08:24	67279-1 RAW	1:08:24 PM	2355.59	1		2340.1	9.534	9534.211	ng/L	
Hg2600-2	DM2	SAM	1611325-02RE1	20	12/6/2016 13:12:32	67280-1 RAW	1:12:32 PM	753.50	1		738.0	2.900	58.000	ng/L	
Hg2600-2	DM2	SAM	F612277-DUP1	1000	12/6/2016 13:16:40	67281-1 RAW	1:16:40 PM	1527.64	1		1512.1	6.160	6160.091	ng/L	
Hg2600-2	DM2	SAM	F612277-MS1	1000	12/6/2016 13:20:49	67282-1 RAW	1:20:49 PM	2809.74	1		2794.2	11.385	11384.976	ng/L	
Hg2600-2	DM2	SAM	F612277-MSD1	1000	12/6/2016 13:24:57	67283-1 RAW	1:24:57 PM	2755.19	1		2739.7	11.163	11162.657	ng/L	
Hg2600-2	DM2	SAM	F612277-MS2	1000	12/6/2016 13:29:07	67284-1 RAW	1:29:07 PM	3386.12	1		3370.6	13.734	13733.879	ng/L	
Hg2600-2	DM2	SAM	F612277-MSD2	1000	12/6/2016 13:33:15	67285-1 RAW	1:33:15 PM	3595.12	1		3579.6	14.586	14585.610	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV3	1	12/6/2016 13:37:23	67286-1 RAW	1:37:23 PM	1229.56			1214.0	4.947	4.947	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB3	1	12/6/2016 13:41:32	67287-1 RAW	1:41:32 PM	94.15			78.6	0.320	0.320	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK1	1	12/6/2016 13:45:40	67288-1 RAW	1:45:40 PM	37.93	2		22.4	0.091	0.091	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK2	1	12/6/2016 13:49:49	67289-1 RAW	1:49:49 PM	38.74	2		23.2	0.095	0.095	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK3	1	12/6/2016 13:53:57	67290-1 RAW	1:53:57 PM	33.66	2		18.1	0.074	0.074	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK4	1	12/6/2016 13:58:06	67291-1 RAW	1:58:06 PM	33.09	2		17.6	0.072	0.072	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK5	1	12/6/2016 14:02:14	67292-1 RAW	2:02:14 PM	22.24	3		6.7	0.027	0.027	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK6	1	12/6/2016 14:06:22	67293-1 RAW	2:06:22 PM	18.42	3		2.9	0.012	0.012	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK7	1	12/6/2016 14:10:31	67294-1 RAW	2:10:31 PM	24.13	4		8.6	0.035	0.035	ng/L	
Hg2600-2	DM2	BLK	F611523-BLK8	1	12/6/2016 14:14:39	67295-1 RAW	2:14:39 PM	32.92	5		17.4	0.071	0.071	ng/L	
Hg2600-2	DM2	SAM	F611523-BS1	1	12/6/2016 14:18:48	67296-1 RAW	2:18:48 PM	3877.58	2		3862.1	15.652	15.652	ng/L	
Hg2600-2	DM2	SAM	F611523-BSD1	1	12/6/2016 14:22:56	67297-1 RAW	2:22:56 PM	3804.84	2		3789.3	15.356	15.356	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV4	1	12/6/2016 14:27:04	67298-1 RAW	2:27:04 PM	1165.97			1150.4	4.688	4.688	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB4	1	12/6/2016 14:31:13	67299-1 RAW	2:31:13 PM	38.27			22.8	0.093	0.093	ng/L	

Instrument	Analyst	Sample		Dilution	Analyzed	FileID	RunEnd	Uncorrected Response	Batch ID	Correction ?	RESP	InitialResult	FinalResult	InitialUnits	Comments
		Type	LabNumber												
Hg2600-2	DM2	SAM	1611459-01	1	12/6/2016 14:35:21	67300-1.RAW	2:35:21 PM	465.71	2		450.2	1.748	1.748	ng/L	
Hg2600-2	DM2	SAM	1611459-03	1	12/6/2016 14:39:30	67301-1.RAW	2:39:30 PM	393.59	2		378.1	1.454	1.454	ng/L	
Hg2600-2	DM2	SAM	1611459-04	1	12/6/2016 14:43:38	67302-1.RAW	2:43:38 PM	473.70	2		458.2	1.781	1.781	ng/L	
Hg2600-2	DM2	SAM	1611459-05	1	12/6/2016 14:47:47	67303-1.RAW	2:47:47 PM	1274.43	2		1258.9	5.044	5.044	ng/L	
Hg2600-2	DM2	SAM	1611459-06	1	12/6/2016 14:51:55	67304-1.RAW	2:51:55 PM	37.39	2		21.9	0.002	0.002	ng/L	
Hg2600-2	DM2	SAM	1611548-09	1	12/6/2016 14:56:03	67305-1.RAW	2:56:03 PM	28.97	2		13.4	-0.032	-0.032	ng/L	
Hg2600-2	DM2	SAM	1611551-05	2500	12/6/2016 15:00:12	67306-1.RAW	3:00:12 PM	143.70	5		128.2	0.522	1305.885	ng/L	
Hg2600-2	DM2	SAM	1611551-06	2500	12/6/2016 15:04:20	67307-1.RAW	3:04:20 PM	93.47	4		77.9	0.318	794.095	ng/L	
Hg2600-2	DM2	SAM	1611552-02	2500	12/6/2016 15:08:29	67308-1.RAW	3:08:29 PM	65.25	4		49.7	0.203	506.651	ng/L	
Hg2600-2	DM2	SAM	1611552-03	2500	12/6/2016 15:12:37	67309-1.RAW	3:12:37 PM	45.71	4		30.2	0.123	307.514	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV5	1	12/6/2016 15:16:45	67310-1.RAW	3:16:45 PM	1160.759286			1145.2	4.667	4.667	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB5	1	12/6/2016 15:20:54	67311-1.RAW	3:20:54 PM	24.69			9.2	0.037	0.037	ng/L	
Hg2600-2	DM2	SAM	1611600-14	1	12/6/2016 15:25:02	67312-1.RAW	3:25:02 PM	46.02	3		30.5	0.087	0.087	ng/L	
Hg2600-2	DM2	SAM	1611600-15	1	12/6/2016 15:29:11	67313-1.RAW	3:29:11 PM	29.14	3		13.6	0.019	0.019	ng/L	
Hg2600-2	DM2	SAM	1611690-01	1	12/6/2016 15:33:19	67314-1.RAW	3:33:19 PM	23.54	2		8.0	-0.054	-0.054	ng/L	
Hg2600-2	DM2	SAM	1611690-02	1	12/6/2016 15:37:28	67315-1.RAW	3:37:28 PM	2121.19	2		2105.7	8.494	8.494	ng/L	
Hg2600-2	DM2	SAM	1611690-03	1	12/6/2016 15:41:36	67316-1.RAW	3:41:36 PM	2112.54	2		2097.0	8.459	8.459	ng/L	
Hg2600-2	DM2	SAM	1611691-01	1	12/6/2016 15:45:44	67317-1.RAW	3:45:44 PM	3477.83	2		3462.3	14.023	14.023	ng/L	
Hg2600-2	DM2	SAM	1611691-02	1	12/6/2016 15:49:53	67318-1.RAW	3:49:53 PM	3865.94	2		3850.4	15.605	15.605	ng/L	
Hg2600-2	DM2	SAM	1611691-03	1	12/6/2016 15:54:01	67319-1.RAW	3:54:01 PM	65.70	2		50.2	0.118	0.118	ng/L	
Hg2600-2	DM2	SAM	F611523-DUP1	1	12/6/2016 15:58:10	67320-1.RAW	3:58:10 PM	475.28	2		459.8	1.787	1.787	ng/L	
Hg2600-2	DM2	SAM	F611523-MS1	1	12/6/2016 16:02:18	67321-1.RAW	4:02:18 PM	6002.13	2		5986.6	24.310	24.310	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV6	1	12/6/2016 16:06:26	67322-1.RAW	4:06:26 PM	1228.33			1212.8	4.943	4.943	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB6	1	12/6/2016 16:10:35	67323-1.RAW	4:10:35 PM	64.06			48.5	0.198	0.198	ng/L	
Hg2600-2	DM2	SAM	F611523-MSD1	1	12/6/2016 16:14:44	67324-1.RAW	4:14:44 PM	5771.20	2		5755.7	23.369	23.369	ng/L	
Hg2600-2	DM2	SAM	F611523-MS2	1	12/6/2016 16:18:53	67325-1.RAW	4:18:53 PM	6755.95	2		6740.4	27.382	27.382	ng/L	
Hg2600-2	DM2	SAM	F611523-MSD2	1	12/6/2016 16:23:02	67326-1.RAW	4:23:02 PM	6724.19	2		6708.7	27.253	27.253	ng/L	
Hg2600-2	DM2	BLK	F611534-BLK1	20	12/6/2016 16:27:11	67327-1.RAW	4:27:11 PM	106.40	6		90.9	0.370	7.407	ng/L	
Hg2600-2	DM2	BLK	F611534-BLK2	20	12/6/2016 16:31:19	67328-1.RAW	4:31:19 PM	43.10	6		27.6	0.112	2.248	ng/L	
Hg2600-2	DM2	BLK	F611534-BLK3	20	12/6/2016 16:35:27	67329-1.RAW	4:35:27 PM	32.16	6		16.6	0.068	1.356	ng/L	
Hg2600-2	DM2	SAM	F611534-BS1	20	12/6/2016 16:39:36	67330-1.RAW	4:39:36 PM	1251.94	6		1236.4	4.855	97.104	ng/L	
Hg2600-2	DM2	SAM	F611534-BSD1	20	12/6/2016 16:43:44	67331-1.RAW	4:43:44 PM	1276.18	6		1260.7	4.954	99.080	ng/L	
Hg2600-2	DM2	SAM	1611242-12	1000	12/6/2016 16:47:53	67332-1.RAW	4:47:53 PM	6007.26	6		5991.7	24.414	24414.129	ng/L	
Hg2600-2	DM2	SAM	1611242-13	1000	12/6/2016 16:52:01	67333-1.RAW	4:52:01 PM	1799.67	6		1784.2	7.267	7267.184	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV7	1	12/6/2016 16:56:11	67334-1.RAW	4:56:11 PM	1212.85			1197.3	4.879	4.879	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB7	1	12/6/2016 17:00:19	67335-1.RAW	5:00:19 PM	56.16			40.6	0.166	0.166	ng/L	
Hg2600-2	DM2	SAM	1611242-14	1000	12/6/2016 17:04:27	67336-1.RAW	5:04:27 PM	1040.09	6		1024.6	4.172	4171.708	ng/L	
Hg2600-2	DM2	SAM	1611249-01	1000	12/6/2016 17:08:36	67337-1.RAW	5:08:36 PM	2590.40	6		2574.9	10.490	10489.572	ng/L	
Hg2600-2	DM2	SAM	1611249-02	1000	12/6/2016 17:12:44	67338-1.RAW	5:12:44 PM	321.77	6		306.2	1.244	1244.361	ng/L	
Hg2600-2	DM2	SAM	1611249-03	1000	12/6/2016 17:16:53	67339-1.RAW	5:16:53 PM	2510.28	6		2494.8	10.163	10163.069	ng/L	
Hg2600-2	DM2	SAM	1611249-04	1000	12/6/2016 17:21:01	67340-1.RAW	5:21:01 PM	10493.00	6		10477.5	42.695	42694.620	ng/L	
Hg2600-2	DM2	SAM	1611249-05	1000	12/6/2016 17:25:09	67341-1.RAW	5:25:09 PM	8829.77	6		8814.3	35.917	35916.551	ng/L	
Hg2600-2	DM2	SAM	1611249-06	1000	12/6/2016 17:29:18	67342-1.RAW	5:29:18 PM	2516.61	6		2501.1	10.189	10188.873	ng/L	
Hg2600-2	DM2	SAM	1611249-07	1000	12/6/2016 17:33:26	67343-1.RAW	5:33:26 PM	2398.34	6		2382.8	9.707	9706.890	ng/L	
Hg2600-2	DM2	SAM	1611249-08	1000	12/6/2016 17:37:35	67344-1.RAW	5:37:35 PM	2773.82	6		2758.3	11.237	11237.073	ng/L	
Hg2600-2	DM2	SAM	1611249-09	1000	12/6/2016 17:41:43	67345-1.RAW	5:41:43 PM	3676.62	6		3661.1	14.916	14916.213	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV8	1	12/6/2016 17:45:52	67346-1.RAW	5:45:52 PM	1269.52			1254.0	5.110	5.110	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB8	1	12/6/2016 17:50:00	67347-1.RAW	5:50:00 PM	52.00			36.5	0.149	0.149	ng/L	
Hg2600-2	DM2	SAM	1611323-01	1000	12/6/2016 17:54:08	67348-1.RAW	5:54:08 PM	326.72	6		311.2	1.265	1264.565	ng/L	
Hg2600-2	DM2	SAM	1611323-02	1000	12/6/2016 17:58:18	67349-1.RAW	5:58:18 PM	996.12	6		980.6	3.992	3992.497	ng/L	
Hg2600-2	DM2	SAM	1611323-03	1000	12/6/2016 18:02:26	67350-1.RAW	6:02:26 PM	863.40	6		847.9	3.452	3451.641	ng/L	
Hg2600-2	DM2	SAM	1611323-04	1000	12/6/2016 18:06:35	67351-1.RAW	6:06:35 PM	977.89	6		962.4	3.918	3918.208	ng/L	
Hg2600-2	DM2	SAM	1611323-05	1000	12/6/2016 18:10:43	67352-1.RAW	6:10:43 PM	136.50	6		121.0	0.489	489.365	ng/L	
Hg2600-2	DM2	SAM	1611323-06	1000	12/6/2016 18:14:51	67353-1.RAW	6:14:51 PM	1129.31	6		1113.8	4.535	4535.279	ng/L	
Hg2600-2	DM2	SAM	1611323-07	1000	12/6/2016 18:19:00	67354-1.RAW	6:19:00 PM	498.37	6		482.9	1.964	1964.068	ng/L	
Hg2600-2	DM2	SAM	1611323-08	1000	12/6/2016 18:23:08	67355-1.RAW	6:23:08 PM	452.05	6		436.5	1.775	1775.296	ng/L	
Hg2600-2	DM2	SAM	1611249-05RE1	2500	12/6/2016 18:27:17	67356-1.RAW	6:27:17 PM	3450.87	6		3435.4	13.998	34996.053	ng/L	
Hg2600-2	DM2	SAM	1611249-06RE1	1000	12/6/2016 18:31:26	67357-1.RAW	6:31:26 PM	2536.39	6		2520.9	10.270	10269.502	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCV9	1	12/6/2016 18:35:35	67358-1.RAW	6:35:35 PM	1231.15			1215.6	4.954	4.954	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCB9	1	12/6/2016 18:39:43	67359-1.RAW	6:39:43 PM	39.04			23.5	0.096	0.096	ng/L	
Hg2600-2	DM2	SAM	F611534-DUP1	1000	12/6/2016 18:43:52	67360-1.RAW	6:43:52 PM	2251.05	6		2235.5	9.107	9106.672	ng/L	
Hg2600-2	DM2	SAM	F611534-MS1	1000	12/6/2016 18:48:00	67361-1.RAW	6:48:00 PM	3584.24	6		3568.7	14.540	14539.727	ng/L	
Hg2600-2	DM2	SAM	F611534-MSD1	1000	12/6/2016 18:52:10	67362-1.RAW	6:52:10 PM	3466.11	6		3450.6	14.058	14058.329	ng/L	
Hg2600-2	DM2	SAM	F611534-MS2	1000	12/6/2016 18:56:18	67363-1.RAW	6:56:18 PM	1579.07	6		1563.6	6.368	6368.193	ng/L	
Hg2600-2	DM2	SAM	F611534-MSD2	1000	12/6/2016 19:00:26	67364-1.RAW	7:00:26 PM	1535.70	6		1520.2	6.191	6191.419	ng/L	

Instrument	Analyst	Sample		Dilution	Analyzed	FileID	RunEnd	Uncorrected Response	Batch ID	Correction		InitialResult	FinalResult	InitialUnits	Comments
		Type	LabNumber							?	RESP				
Hg2600-2	DM2	SAM	1611323-05RE1	100	12/6/2016 19:04:35	67365-1.RAW	7:04:35 PM	997.88	6		982.4	3.967	396.666	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCVA	1	12/6/2016 19:08:43	67366-1.RAW	7:08:43 PM	1231.95			1216.4	4.957	4.957	ng/L	
Hg2600-2	DM2	CAL	SEQ-CCBA	1	12/6/2016 19:12:52	67367-1.RAW	7:12:52 PM	52.39			36.9	0.150	0.150	ng/L	

TotalMercury EPA1631 Operat DM BlankS: 15.519 Calib Eqn: Conc = (Area-15.51) Run Date: 12/6/2016 Blank SD: 0.735807605  
 Workst THG260 CalibFa 245.38 Status: QC Warnings:7/QC t Run Time: 10:17:01 Blank RSD%: 4.741224237  
 Method #### R: 0.9999 R²: 0.9998 CF SD: 2.616760066  
 Descrip THG26002-161206-1 CF RSD%: 1.066393099

SampleID	Location	Rinse	Dilute	Blank	Conc (ppt)	MB%	FinalConc	Rec%	QA	RawData	RunEnd	Peak (Raw)	Control (etf)	Flags	RunCount
Clean				0.00	5.74					67238-1.RAW	10:19:53	1407.82	Clean	OK	1
clean				0.00	0.00					67239-1.RAW	10:22:45	0.90	Clean	OK	1
ws				15.52	0.01					67240-1.RAW	10:26:53	17.62	Sample	OK	1
ws				15.52	0.00					67241-1.RAW	10:31:03	15.24	Sample	OK	1
ws				15.52	0.01					67242-1.RAW	10:35:11	19.03	Sample	OK	1
SEQ-HBL1	A1		1	0.00	0.07					67243-1.RAW	10:39:19	15.96	Sample	OK	1
SEQ-HBL2	A2		1	0.00	0.06					67244-1.RAW	10:43:28	14.67	Sample	OK	1
SEQ-HBL3	A3		1	0.00	0.06					67245-1.RAW	10:47:36	15.93	Sample	OK	1
SEQ-CAL1	A4		1	15.52	0.50			99.75		67246-1.RAW	10:51:45	137.91	Sample	OK	1
SEQ-CAL2	A5		1	15.52	1.00			99.73		67247-1.RAW	10:55:53	260.23	Sample	OK	1
SEQ-CAL3	A6		1	15.52	5.02			100.37		67248-1.RAW	11:00:01	1246.93	Sample	OK	1
SEQ-CAL4	A7		1	15.52	19.72			98.62		67249-1.RAW	11:04:10	4855.40	Sample	OK	1
SEQ-CAL5	A8		1	15.52	40.62			101.54		67250-1.RAW	11:08:18	9981.95	Sample	OK	1
SEQ-ICV1	A9		1	15.52	4.99			99.76		67251-1.RAW	11:12:27	1239.47	Sample	OK	1
F612277-BLK1	A10		20	15.52	3.40					67252-1.RAW	11:16:35	57.22	Sample	OK	1
F612277-BLK2	A11		20	15.52	1.80					67253-1.RAW	11:20:44	37.66	Sample	OK	1
F612277-BLK3	A12		20	15.52	1.24					67254-1.RAW	11:24:52	30.78	Sample	OK	1
F612277-BS1	A13		20	15.52	104.29					67255-1.RAW	11:29:00	1295.12	Sample	OK	1
F612277-BSD1	A14		20	15.52	105.69					67256-1.RAW	11:33:09	1312.21	Sample	OK	1
1611242-09	A15		1000	15.52	5449.01					67257-1.RAW	11:37:17	1352.62	Sample	OK	1
1611325-01	A16		1000	15.52	6508.45					67258-1.RAW	11:41:26	1612.59	Sample	OK	1
1611325-02	A17		1000	15.52	148.23					67259-1.RAW	11:45:34	51.89	Sample	OK	1
1611325-04	A18		1000	15.52	10279.61					67260-1.RAW	11:49:43	2537.97	Sample	OK	1
1611325-05	A19		1000	15.52	8283.57					67261-1.RAW	11:53:51	2048.18	Sample	OK	1
SEQ-CCV1	A20		1	15.52	5.04			100.75		67262-1.RAW	11:57:59	1251.61	Sample	OK	1
SEQ-CCB1	A21		1	15.52	0.10			0.00		67263-1.RAW	12:02:08	38.93	Sample	OK	1
1611325-06	B1		1000	15.52	12092.82					67264-1.RAW	12:06:16	2982.91	Sample	OK	1
1611326-01	B2		1000	15.52	10266.41					67265-1.RAW	12:10:25	2534.73	Sample	OK	1
1611326-02	B3		1000	15.52	20376.15					67266-1.RAW	12:14:34	5015.50	Sample	OK	1
1611326-03	B4		1000	15.52	12317.88					67267-1.RAW	12:18:42	3038.13	Sample	OK	1
1611326-04	B5		1000	15.52	10907.21					67268-1.RAW	12:22:51	2691.98	Sample	OK	1
1611326-05	B6		1000	15.52	6338.37					67269-1.RAW	12:26:59	1570.85	Sample	OK	1
1611326-06	B7		1000	15.52	6730.39					67270-1.RAW	12:31:08	1667.05	Sample	OK	1
1611326-07	B8		1000	15.52	5476.79					67271-1.RAW	12:35:16	1359.44	Sample	OK	1
1611326-08	B9		1000	15.52	7831.30					67272-1.RAW	12:39:25	1937.20	Sample	OK	1
1611392-08	B10		1000	15.52	6195.84					67273-1.RAW	12:43:33	1535.88	Sample	OK	1
SEQ-CCV2	B11		1	15.52	4.85			96.93		67274-1.RAW	12:47:41	1204.73	Sample	OK	1
SEQ-CCB2	B12		1	15.52	0.10			0.00		67275-1.RAW	12:51:50	39.69	Sample	OK	1
1611392-09	B13		1000	15.52	6327.37					67276-1.RAW	12:55:58	1568.15	Sample	OK	1
1611392-10	B14		1000	15.52	8623.13					67277-1.RAW	13:00:07	2131.50	Sample	OK	1
1611392-11	B15		1000	15.52	7552.11					67278-1.RAW	13:04:15	1868.69	Sample	OK	1
1611392-12	B16		1000	15.52	9536.36					67279-1.RAW	13:08:24	2355.59	Sample	OK	1
1611325-02RE1	B17		20	15.52	60.15					67280-1.RAW	13:12:32	753.50	Sample	OK	1
F612277-DUP1	B18		1000	15.52	6162.24					67281-1.RAW	13:16:40	1527.64	Sample	OK	1
F612277-MS1	B19		1000	15.52	11387.13			184.76		67282-1.RAW	13:20:49	2809.74	Sample	OK	1
F612277-MSD1	B20		1000	15.52	11164.81					67283-1.RAW	13:24:57	2755.19	Sample	OK	1
F612277-MS2	B21		1000	15.52	13736.03			123.01		67284-1.RAW	13:29:07	3386.12	Sample	OK	1
F612277-MSD2	C1		1000	15.52	14587.76					67285-1.RAW	13:33:15	3595.12	Sample	OK	1
SEQ-CCV3	C2		1	15.52	4.95			98.95		67286-1.RAW	13:37:23	1229.56	Sample	OK	1
SEQ-CCB3	C3		1	15.52	0.32			0.00		67287-1.RAW	13:41:32	94.15	Sample	OK	1
F611523-BLK1	C4		1	15.52	0.09					67288-1.RAW	13:45:40	37.93	Sample	OK	1
F611523-BLK2	C5		1	15.52	0.09					67289-1.RAW	13:49:49	38.74	Sample	OK	1
F611523-BLK3	C6		1	15.52	0.07					67290-1.RAW	13:53:57	33.66	Sample	OK	1
F611523-BLK4	C7		1	15.52	0.07					67291-1.RAW	13:58:06	33.09	Sample	OK	1
F611523-BLK5	C8		1	15.52	0.03					67292-1.RAW	14:02:14	22.24	Sample	OK	1
F611523-BLK6	C9		1	15.52	0.01					67293-1.RAW	14:06:22	16.42	Sample	OK	1
F611523-BLK7	C10		1	15.52	0.04					67294-1.RAW	14:10:31	24.13	Sample	OK	1
F611523-BLK8	C11		1	15.52	0.07					67295-1.RAW	14:14:39	32.92	Sample	OK	1
F611523-BS1	C12		1	15.52	15.74					67296-1.RAW	14:18:48	3877.58	Sample	OK	1
F611523-BSD1	C13		1	15.52	15.44					67297-1.RAW	14:22:56	3804.84	Sample	OK	1



SEQ-CCV4	C14	1	15.52	4.69	93.77	67298-1.RAW	14.27.04	1165.97	Sample	OK	1
SEQ-CCB4	C15	1	15.52	0.09	0.00	67299-1.RAW	14.31.13	38.27	Sample	OK	1
1611459-01	C16	1	15.52	1.83		67300-1.RAW	14.35.21	465.71	Sample	OK	1
1611459-03	C17	1	15.52	1.54		67301-1.RAW	14.39.30	393.59	Sample	OK	1
1611459-04	C18	1	15.52	1.87		67302-1.RAW	14.43.38	473.70	Sample	OK	1
1611459-05	C19	1	15.52	5.13		67303-1.RAW	14.47.47	1274.43	Sample	OK	1
1611459-06	C20	1	15.52	0.09		67304-1.RAW	14.51.55	37.39	Sample	OK	1
1611548-09	C21	1	15.52	0.05		67305-1.RAW	14.56.03	28.97	Sample	OK	1
1611551-05	A1	2500	15.52	1305.96		67306-1.RAW	15.00.12	143.70	Sample	OK	1
1611551-06	A2	2500	15.52	794.13		67307-1.RAW	15.04.20	93.47	Sample	OK	1
1611552-02	A3	2500	15.52	506.69		67308-1.RAW	15.08.29	65.25	Sample	OK	1
1611552-03	A4	2500	15.52	307.55		67309-1.RAW	15.12.37	45.71	Sample	OK	1
SEQ-CCV5	A5	1	15.52	4.67	93.34	67310-1.RAW	15.16.45	1160.76	Sample	OK	1
SEQ-CCB5	A6	1	15.52	0.04	0.00	67311-1.RAW	15.20.54	24.69	Sample	OK	1
1611600-14	A7	1	15.52	0.12		67312-1.RAW	15.25.02	46.02	Sample	OK	1
1611600-15	A8	1	15.52	0.06		67313-1.RAW	15.29.11	29.14	Sample	OK	1
1611690-01	A9	1	15.52	0.03		67314-1.RAW	15.33.19	23.54	Sample	OK	1
1611690-02	A10	1	15.52	8.58		67315-1.RAW	15.37.28	2121.19	Sample	OK	1
1611690-03	A11	1	15.52	8.55		67316-1.RAW	15.41.36	2112.54	Sample	OK	1
1611691-01	A12	1	15.52	14.11		67317-1.RAW	15.45.44	3477.83	Sample	OK	1
1611691-02	A13	1	15.52	15.69		67318-1.RAW	15.49.53	3865.94	Sample	OK	1
1611691-03	A14	1	15.52	0.20		67319-1.RAW	15.54.01	65.70	Sample	OK	1
F611523-DUP1	A15	1	15.52	1.87		67320-1.RAW	15.58.10	475.28	Sample	OK	1
F611523-MS1	A16	1	15.52	24.40	848.99	67321-1.RAW	16.02.18	6002.13	Sample	OK	1
SEQ-CCV6	A17	1	15.52	4.94	98.85	67322-1.RAW	16.06.26	1228.33	Sample	OK	1
SEQ-CCB6	A18	1	15.52	0.20	0.00	67323-1.RAW	16.10.35	64.06	Sample	OK	1
F611523-MSD1	A19	1	15.52	23.46		67324-1.RAW	16.14.44	5771.20	Sample	OK	1
F611523-MS2	A20	1	15.52	27.47	107.91	67325-1.RAW	16.18.53	6755.95	Sample	OK	1
F611523-MSD2	A21	1	15.52	27.34		67326-1.RAW	16.23.02	6724.19	Sample	OK	1
F611534-BLK1	B1	20	15.52	7.41		67327-1.RAW	16.27.11	105.40	Sample	OK	1
F611534-BLK2	B2	20	15.52	2.25		67328-1.RAW	16.31.19	43.10	Sample	OK	1
F611534-BLK3	B3	20	15.52	1.36		67329-1.RAW	16.35.27	32.16	Sample	OK	1
F611534-BS1	B4	20	15.52	100.77		67330-1.RAW	16.39.36	1251.94	Sample	OK	1
F611534-BSD1	B5	20	15.52	102.75		67331-1.RAW	16.43.44	1276.18	Sample	OK	1
1611242-12	B6	1000	15.52	24417.80		67332-1.RAW	16.47.53	6007.26	Sample	OK	1
1611242-13	B7	1000	15.52	7270.85		67333-1.RAW	16.52.01	1799.67	Sample	OK	1
SEQ-CCV7	B8	1	15.52	4.88	97.59	67334-1.RAW	16.56.11	1212.85	Sample	OK	1
SEQ-CCB7	B9	1	15.52	0.17	0.00	67335-1.RAW	17.00.19	56.16	Sample	OK	1
1611242-14	B10	1000	15.52	4175.38		67336-1.RAW	17.04.27	1040.09	Sample	OK	1
1611249-01	B11	1000	15.52	10493.24		67337-1.RAW	17.08.36	2590.40	Sample	OK	1
1611249-02	B12	1000	15.52	1248.03		67338-1.RAW	17.12.44	321.77	Sample	OK	1
1611249-03	B13	1000	15.52	10166.74		67339-1.RAW	17.16.53	2510.28	Sample	OK	1
1611249-04	B14	1000	15.52	42698.29		67340-1.RAW	17.21.01	10493.00	Sample	OK	1
1611249-05	B15	1000	15.52	35920.22		67341-1.RAW	17.25.09	8629.77	Sample	OK	1
1611249-06	B16	1000	15.52	10192.54		67342-1.RAW	17.29.18	2516.61	Sample	OK	1
1611249-07	B17	1000	15.52	9710.56		67343-1.RAW	17.33.26	2398.34	Sample	OK	1
1611249-08	B18	1000	15.52	11240.74		67344-1.RAW	17.37.35	2773.82	Sample	OK	1
1611249-09	B19	1000	15.52	14919.88		67345-1.RAW	17.41.43	3676.62	Sample	OK	1
SEQ-CCV8	B20	1	15.52	5.11	102.21	67346-1.RAW	17.45.52	1269.52	Sample	OK	1
SEQ-CCB8	B21	1	15.52	0.15	0.00	67347-1.RAW	17.50.00	52.00	Sample	OK	1
1611323-01	C1	1000	15.52	1268.24		67348-1.RAW	17.54.08	326.72	Sample	OK	1
1611323-02	C2	1000	15.52	3996.17		67349-1.RAW	17.58.18	996.12	Sample	OK	1
1611323-03	C3	1000	15.52	3455.31		67350-1.RAW	18.02.26	863.40	Sample	OK	1
1611323-04	C4	1000	15.52	3921.88		67351-1.RAW	18.06.35	977.89	Sample	OK	1
1611323-05	C5	1000	15.52	493.04		67352-1.RAW	18.10.43	136.50	Sample	OK	1
1611323-06	C6	1000	15.52	4538.95		67353-1.RAW	18.14.51	1129.31	Sample	OK	1
1611323-07	C7	1000	15.52	1967.74		67354-1.RAW	18.19.00	498.37	Sample	OK	1
1611323-08	C8	1000	15.52	1778.97		67355-1.RAW	18.23.08	452.05	Sample	OK	1
1611249-05RE1	C9	2500	15.52	34999.72		67356-1.RAW	18.27.17	3450.87	Sample	OK	1
1611249-06RE1	C10	1000	15.52	10273.17		67357-1.RAW	18.31.26	2536.39	Sample	OK	1
SEQ-CCV9	C11	1	15.52	4.95	99.08	67358-1.RAW	18.35.35	1231.15	Sample	OK	1
SEQ-CCB9	C12	1	15.52	0.10	0.00	67359-1.RAW	18.39.43	39.04	Sample	OK	1
F611534-DUP1	C13	1000	15.52	9110.34		67360-1.RAW	18.43.52	2251.05	Sample	OK	1
F611534-MS1	C14	1000	15.52	14543.40	159.62	67361-1.RAW	18.48.00	3584.24	Sample	OK	1
F611534-MSD1	C15	1000	15.52	14062.00		67362-1.RAW	18.52.10	3466.11	Sample	OK	1

F611534-MS2	C16	1000	15.52	6371.86	45.31	67363-1.RAW	18:56:18	1579.07	Sample	OK	1
F611534-MSD2	C17	1000	15.52	6195.09		67364-1.RAW	19:00:26	1535.70	Sample	OK	1
1611323-05RE1	C18	100	15.52	400.34		67365-1.RAW	19:04:35	997.88	Sample	OK	1
SEQ-CCVA	C19	1	15.52	4.96		67366-1.RAW	19:08:43	1231.95	Sample	OK	1
SEQ-CCBA	C20	1	15.52	0.15		67367-1.RAW	19:12:52	52.39	Sample	OK	1

## ANALYSIS SEQUENCE

6L07020

Instrument: Hg2600-2

Calibration ID: UNASSIGNED

Analyzed: 12/6/2016

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
6L07020-IBL1	QC	1			
6L07020-IBL2	QC	2			
6L07020-IBL3	QC	3			
6L07020-CAL1	QC	4	1605412		
6L07020-CAL2	QC	5	1605413		
6L07020-CAL3	QC	6	1605414		
6L07020-CAL4	QC	7	1605415		
6L07020-CAL5	QC	8	1605416		
6L07020-ICV1	QC	9	1605791		
F612277-BLK1	QC	10			
F612277-BLK2	QC	11			
F612277-BLK3	QC	12			
F612277-BS1	QC	13			
F612277-BSD1	QC	14			
1611242-09	Hg-CVAFS-S-AR	15			Scan all data for Level IV
1611325-01	Hg-CVAFS-S-AR	16			Scan all data for Level IV
1611325-02	Hg-CVAFS-S-AR	17			Scan all data for Level IV
1611325-04	Hg-CVAFS-S-AR	18			Scan all data for Level IV
1611325-05	Hg-CVAFS-S-AR	19			Scan all data for Level IV
6L07020-CCV1	QC	20	1605791		
6L07020-CCB1	QC	21			
1611325-06	Hg-CVAFS-S-AR	22			Scan all data for Level IV
1611326-01	Hg-CVAFS-S-AR	23			Scan all data for Level IV
1611326-02	Hg-CVAFS-S-AR	24			Scan all data for Level IV
1611326-03	Hg-CVAFS-S-AR	25			Scan all data for Level IV
1611326-04	Hg-CVAFS-S-AR	26			Scan all data for Level IV
1611326-05	Hg-CVAFS-S-AR	27			Scan all data for Level IV
1611326-06	Hg-CVAFS-S-AR	28			Scan all data for Level IV
1611326-07	Hg-CVAFS-S-AR	29			Scan all data for Level IV
1611326-08	Hg-CVAFS-S-AR	30			Scan all data for Level IV
1611392-08	Hg-CVAFS-S-AR	31			Scan all data for Level IV
6L07020-CCV2	QC	32	1605791		
6L07020-CCB2	QC	33			
1611392-09	Hg-CVAFS-S-AR	34			Scan all data for Level IV
1611392-10	Hg-CVAFS-S-AR	35			Scan all data for Level IV

Due Date: 12/8/2016

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## ANALYSIS SEQUENCE

6L07020

Instrument: Hg2600-2

Calibration ID: UNASSIGNED

Analyzed: 12/6/2016

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
1611392-11	Hg-CVAFS-S-AR	36			Scan all data for Level IV
1611392-12	Hg-CVAFS-S-AR	37			Scan all data for Level IV
1611325-02RE1	Hg-CVAFS-S-AR	38			Added 12/6/2016 by DM2
F612277-DUP1	QC	39			
F612277-MS1	QC	40			
F612277-MSD1	QC	41			
F612277-MS2	QC	42			
F612277-MSD2	QC	43			
6L07020-CCV3	QC	44	1605791		
6L07020-CCB3	QC	45			
6L07020-CCV4	QC	46	1605791		
6L07020-CCB4	QC	47			
6L07020-CCV5	QC	48	1605791		
6L07020-CCB5	QC	49			
6L07020-CCV6	QC	50	1605791		
6L07020-CCB6	QC	51			
F611534-BLK1	QC	52			
F611534-BLK2	QC	53			
F611534-BLK3	QC	54			
F611534-BS1	QC	55			
F611534-BSD1	QC	56			
1611242-12	Hg-CVAFS-S-AR	57			Scan all data for Level IV
1611242-13	Hg-CVAFS-S-AR	58			Scan all data for Level IV
6L07020-CCV7	QC	59	1605791		
6L07020-CCB7	QC	60			
1611242-14	Hg-CVAFS-S-AR	61			Scan all data for Level IV
1611249-01	Hg-CVAFS-S-AR	62			Scan all data for Level IV
1611249-02	Hg-CVAFS-S-AR	63			Scan all data for Level IV
1611249-03	Hg-CVAFS-S-AR	64			Scan all data for Level IV
1611249-04	Hg-CVAFS-S-AR	65			Scan all data for Level IV
1611249-05	Hg-CVAFS-S-AR	66			Scan all data for Level IV
1611249-06	Hg-CVAFS-S-AR	67			Scan all data for Level IV
1611249-07	Hg-CVAFS-S-AR	68			Scan all data for Level IV
1611249-08	Hg-CVAFS-S-AR	69			Scan all data for Level IV
1611249-09	Hg-CVAFS-S-AR	70			Scan all data for Level IV

Due Date: 12/8/2016

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## ANALYSIS SEQUENCE

6L07020

Instrument: Hg2600-2

Calibration ID: UNASSIGNED

Analyzed: 12/6/2016

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
6L07020-CCV8	QC	71	1605791		
6L07020-CCB8	QC	72			
1611323-01	Hg-CVAFS-S-AR	73			
1611323-02	Hg-CVAFS-S-AR	74			
1611323-03	Hg-CVAFS-S-AR	75			
1611323-04	Hg-CVAFS-S-AR	76			
1611323-05	Hg-CVAFS-S-AR	77			
1611323-06	Hg-CVAFS-S-AR	78			
1611323-07	Hg-CVAFS-S-AR	79			
1611323-08	Hg-CVAFS-S-AR	80			
1611249-05RE1	Hg-CVAFS-S-AR	81			Added 12/6/2016 by DM2
1611249-06RE1	Hg-CVAFS-S-AR	82			Added 12/6/2016 by DM2
6L07020-CCV9	QC	83	1605791		
6L07020-CCB9	QC	84			
F611534-DUPI	QC	85			
F611534-MS1	QC	86			
F611534-MSD1	QC	87			
F611534-MS2	QC	88			
F611534-MSD2	QC	89			
1611323-05RE1	Hg-CVAFS-S-AR	90			Added 12/6/2016 by DM2
6L07020-CCVA	QC	91	1605791		
6L07020-CCBA	QC	92			

Don Moran  
Samples Loaded By

12/6/16  
Date

Don Moran  
Data Processed By

12/7/16  
Date

Due Date: 12/8/2016

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**Failing Data Report - 6L07020**

Sample ID	Analysis	Result	MRL	Dup Result	Source Result	True Value	Units	% Rec.	Rec. LCL	Rec. UCL	RPD	RPD Limit	Over Cal	Failure	Qualifier
1611249-04	Hg-CVAFS-S-AR	6140	89.9				ng/g						FAIL-OVER	PASS	E
F612277-MSD2	Hg-CVAFS-S-AR	2434	104	2134	1567	834.52	ng/g	104	71.00	125.00	35.0	24.00	PASS-OVER	FAIL-MSD (RPD)	QR-08

Don Moran  
 Analyst Reviewed By

12/7/16  
 Date

[Signature]  
 Peer Reviewed By

12/8/16  
 Date

## ANALYSIS SEQUENCE

6L07019

Instrument: Hg2600-2

Calibration ID: UNASSIGNED

Analyzed: 12/6/2016

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
6L07019-IBL1	QC	1			
6L07019-IBL2	QC	2			
6L07019-IBL3	QC	3			
6L07019-CAL1	QC	4	1605412		
6L07019-CAL2	QC	5	1605413		
6L07019-CAL3	QC	6	1605414		
6L07019-CAL4	QC	7	1605415		
6L07019-CAL5	QC	8	1605416		
6L07019-ICV1	QC	9	1605791		
6L07019-CCV1	QC	10	1605791		
6L07019-CCB1	QC	11			
6L07019-CCV2	QC	12	1605791		
6L07019-CCB2	QC	13			
6L07019-CCV3	QC	14	1605791		
6L07019-CCB3	QC	15			
F611523-BLK1	QC	16			
F611523-BLK2	QC	17			
F611523-BLK3	QC	18			
F611523-BLK4	QC	19			
F611523-BLK5	QC	20			
F611523-BLK6	QC	21			
F611523-BLK7	QC	22			
F611523-BLK8	QC	23			
F611523-BS1	QC	24			
F611523-BSD1	QC	25			
6L07019-CCV4	QC	26	1605791		
6L07019-CCB4	QC	27			
1611459-01	Hg-CVAFS-W-1631	28			Scan all data for level IV report
1611459-03	Hg-CVAFS-W-1631	29			Scan all data for level IV report
1611459-04	Hg-CVAFS-W-1631	30			Scan all data for level IV report
1611459-05	Hg-CVAFS-W-1631	31			Scan all data for level IV report
1611459-06	Hg-CVAFS-W-1631	32			Scan all data for level IV report
1611548-09	Hg-CVAFS-W-1631	33			Scan all data for Level IV
1611551-05	Hg-CVAFS-W-1631	34			
1611551-06	Hg-CVAFS-W-1631	35			

Due Date: 12/5/2016

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## ANALYSIS SEQUENCE

6L07019

Instrument: Hg2600-2

Calibration ID: UNASSIGNED

Analyzed: 12/6/2016

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
1611552-02	Hg-CVAFS-W-1631	36			
1611552-03	Hg-CVAFS-W-1631	37			
6L07019-CCV5	QC	38	1605791		
6L07019-CCB5	QC	39			
1611600-14	Hg-CVAFS-W-1631	40			Scan all data for Level IV
1611600-15	Hg-CVAFS-W-1631	41			Scan all data for Level IV
1611690-01	Hg-CVAFS-W-1631	42			
1611690-02	Hg-CVAFS-W-1631	43			
1611690-03	Hg-CVAFS-W-1631	44			
1611691-01	Hg-CVAFS-W-1631	45			
1611691-02	Hg-CVAFS-W-1631	46			
1611691-03	Hg-CVAFS-W-1631	47			
F611523-DUP1	QC	48			
F611523-MS1	QC	49			
6L07019-CCV6	QC	50	1605791		
6L07019-CCB6	QC	51			
F611523-MSD1	QC	52			
F611523-MS2	QC	53			
F611523-MSD2	QC	54			
6L07019-CCV7	QC	55	1605791		
6L07019-CCB7	QC	56			
6L07019-CCV8	QC	57	1605791		
6L07019-CCB8	QC	58			
6L07019-CCV9	QC	59	1605791		
6L07019-CCB9	QC	60			
6L07019-CCVA	QC	61	1605791		
6L07019-CCBA	QC	62			

Don Maxem 12/6/16  
 Samples Loaded By Date

Don Maxem 12/7/16  
 Data Processed By Date

Due Date: 12/5/2016

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**PREPARATION BENCH SHEET**

F611534

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg**

**Prepared: 12/1/2016**

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F611534-BLK1	Blank	0.5	40					
F611534-BLK2	Blank	0.5	40					
F611534-BLK3	Blank	0.5	40					
F611534-BS1	LCS	0.5	40	1605270	40			
F611534-BSD1	LCS Dup	0.5	40	1605270	40			
F611534-DUP1	Duplicate [1611249-07]	0.5808	40					
F611534-MS1	Matrix Spike [1611249-07]	0.565	40	1605712	200			
F611534-MS2	Matrix Spike [1611323-01]	0.5495	40	1605712	200			
F611534-MSD1	Matrix Spike Dup [1611249-07]	0.5289	40	1605712	200			
F611534-MSD2	Matrix Spike Dup [1611323-01]	0.5674	40	1605712	200			

<u>Standard ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>	<u>Reagent ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>
1605270	THg 100ng/mL Primary Spiking Standard	10-Dec-16 00:00	1606137	Omnitrace Hydrochloric Acid	13-Oct-19 00:00
1605712	THg 1,000ng/mL Secondary Spiking Standard	03-Apr-17 00:00	1606163	0.2 N BRCL OCTOBER 2016	19-Apr-17 00:00
			1606188	THg Dilute 1% BrCl	26-Mar-17 00:00
			1606189	THg Washstation (0.5% BrCl)	17-Apr-17 00:00
			1606467	Fisher Nitric Acid, Tracemetal Grade	24-Mar-18 00:00
			1606642	Boiling Chips for AFS prep	10-May-17 00:00
			1606934	25% Hydroxylamine-HCl working solution	29-May-17 00:00
			1606973	5% BrCl	19-Apr-17 00:00

**PREPARATION BENCH SHEET**

F611534

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg**

**Prepared: 12/1/2016**

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-12	NB03SED-CHM333 8678451	0.5642	40	-	-	-	Preservation Blank Created Scan all dat	
1611242-13	NB03SED-CHM334 8678453	0.5066	40	-	-	-	Preservation Blank Created Scan all dat	
1611242-14	NB03SED-CHM390 8678455	0.5523	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-01	NB03SED-CHM332 8680694	0.5424	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-02	NB03SED-CHM381 8680696	0.519	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-03	NB03SED-CHM328 8680698	0.5373	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-04	NB03SED-CHM327 8680700	0.5915	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-05	NB03SEDDUP-11 8680702	0.5308	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-05RE1	NB03SEDDUP-11 8680702	0.5308	40	-	-	-	Preservation Blank Created Added 12/6	Added 12/6/2016 by DM2
1611249-06	NB03SED-CHM380 8680704	0.5408	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-06RE1	NB03SED-CHM380 8680704	0.5408	40	-	-	-	Preservation Blank Created Added 12/6	Added 12/6/2016 by DM2
1611249-07	NB03SED-CHM326 8680708	0.5485	40	QC	-	-	MS/MSD Scan all data for Level IV	
1611249-08	NB03SED-CHM326 DUP 8680711	0.5097	40	-	-	-	Preservation Blank Created Scan all dat	
1611249-09	NB03SED-CHM341 8680713	0.5261	40	-	-	-	Preservation Blank Created Scan all dat	
1611323-01	W-61-HIGH_110816_SED_03	0.5162	40	-	-	-		
1611323-02	W-61-INT_110816_SED_03	0.574	40	-	-	-		
1611323-03	W-61-LOW_110816_SED_03	0.5089	40	-	-	-		
1611323-04	W-61-MID_110816_SED_03	0.5512	40	-	-	-		
1611323-05	W-63-HIGH_110816_SED_03	0.5384	40	-	-	-		

PREPARATION BENCH SHEET

F611534

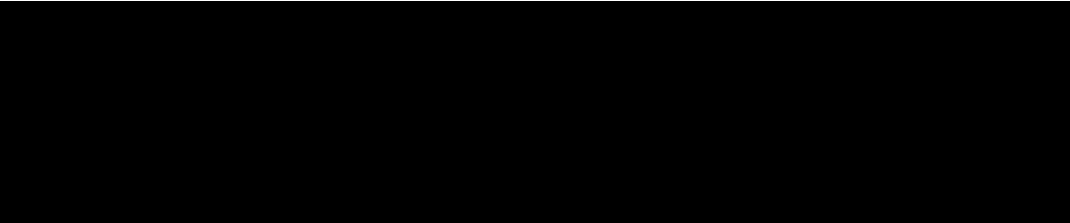
Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/1/2016

1611323-05RE1	W-63-HIGH_110816_SED_03	0.5384	40	-	-	-	Added 12/6/2016 by DM2	Added 12/6/2016 by DM2
1611323-06	W-63-INT_110816_SED_03	0.5758	40	-	-	-		
1611323-07	W-63-LOW_110816_SED_03	0.5556	40	-	-	-		
1611323-08	W-63-MID_110816_SED_03	0.5734	40	-	-	-		



**PREPARATION BENCH SHEET**

F611523

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Water**

**Prepared using: AFS - EPA 1631E BrCl Oxidation**

**Prepared: 12/5/2016**

Lab Number	Sample ID and Source Sample	Initial (mL)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F611523-BLK1	Blank	100	101					SOURCE 1611459-08
F611523-BLK2	Blank	100	101					SOURCE 1611459-08
F611523-BLK3	Blank	100	101					SOURCE 1611459-08
F611523-BLK4	Blank	100	101					SOURCE 1611600-16
F611523-BLK5	Blank	100	101					SOURCE 1611600-16
F611523-BLK6	Blank	100	101					SOURCE 1611600-16
F611523-BLK7	Blank	100	105					
F611523-BLK8	Blank	100	110					
F611523-BS1	LCS	50	50.5	1604715	100			
F611523-BSD1	LCS Dup	50	50.5	1604715	100			
F611523-DUP1	Duplicate [1611459-01]	100	101					
F611523-MS1	Matrix Spike [1611459-05]	49.50495	50	1605272	100			[Spk] 100mL->101mL; 101mL->101mL; Spiked 50mL
F611523-MS2	Matrix Spike [1611690-02]	49.50495	50	1605272	100			[Spk] 100mL->101mL; 101mL->101mL; Spiked 50mL
F611523-MSD1	Matrix Spike Dup [1611459-05]	49.50495	50	1605272	100			[Spk] 100mL->101mL; 101mL->101mL; Spiked 50mL
F611523-MSD2	Matrix Spike Dup [1611690-02]	49.50495	50	1605272	100			[Spk] 100mL->101mL; 101mL->101mL; Spiked 50mL

<u>Standard ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>	<u>Reagent ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>
1604715	Nist 1641D 200X	18-Aug-17 00:00	1606163	0.2 N BRCL OCTOBER 2016	19-Apr-17 00:00
1605272	THg 10ng/mL Calibration Standard	10-Dec-16 00:00	1606188	THg Dilute 1% BrCl	26-Mar-17 00:00
			1606189	THg Washstation (0.5% BrCl)	17-Apr-17 00:00
			1606934	25% Hydroxylamine-HCl working solution	29-May-17 00:00
			1607029	3% SnCl2 THg reductant	17-May-17 00:00

**PREPARATION BENCH SHEET**

F611523

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Water**

**Prepared using: AFS - EPA 1631E BrCl Oxidation**

**Prepared: 12/5/2016**

Lab Number	Sample ID	Initial (mL)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611459-01	OL-2511-01	100	101	-	-	-	Preservation Blank Created Scan all dat	
1611459-03	OL-2511-02	100	101	-	-	-	Preservation Blank Created Scan all dat	
1611459-04	OL-2511-03	100	101	-	-	-	Preservation Blank Created Scan all dat	
1611459-05	OL-2511-04	100	101	-	-	-	Preservation Blank Created Scan all dat	
1611459-06	OL-2511-05	100	101	-	-	-	Preservation Blank Created Scan all dat	
1611548-09	TB11152016-01 Water	100	101	-	-	-	Preservation blank created Scan all data	
1611551-05	12PS D103A BRINE - Total Hg	100	110	-	-	-		
1611551-05RE1	12PS D103A BRINE - Total Hg	100	110	-	-	-	Added 12/6/2016 by DM2	Added 12/6/2016 by DM2
1611551-06	12PS D103A BRINE - Dissolved Hg	100	105	-	-	-		
1611551-06RE1	12PS D103A BRINE - Dissolved Hg	100	105	-	-	-	Added 12/6/2016 by DM2	Added 12/6/2016 by DM2
1611552-02	11PS-A BRINE - Total Hg	100	105	-	-	-		
1611552-02RE1	11PS-A BRINE - Total Hg	100	105	-	-	-	Added 12/6/2016 by DM2	Added 12/6/2016 by DM2
1611552-03	11PS-A BRINE - Dissolved Hg	100	105	-	-	-		
1611552-03RE1	11PS-A BRINE - Dissolved Hg	100	105	-	-	-	Added 12/6/2016 by DM2	Added 12/6/2016 by DM2
1611600-14	NB316FB	100	101	-	-	-	Preservation Blank Created Scan all dat	
1611600-15	TB11172016-01	100	101	-	-	-	Preservation Blank Created Scan all dat	
1611690-01	Cullman WWTP Field Blank	100	101	-	-	-		
1611690-02	Cullman WWTP Effluent	100	101	-	-	-		
1611690-03	Cullman WWTP Duplicate	100	101	-	-	-		

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Date: 12/5/2016

PREPARATION BENCH SHEET

F611523

Eurofins Frontier Global Sciences, Inc.

Matrix: Water

Prepared using: AFS - EPA 1631E BrCl Oxidation

Prepared: 12/5/2016

1611691-01	BOAZ Sewer Effluent	100	101	-	-	-		
1611691-02	BOAZ Sewer Duplicate	100	101	-	-	-		
1611691-03	BOAZ Sewer Field Blank	100	101	-	-	-		



**PREPARATION BENCH SHEET**

F612277

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg**

**Prepared: 12/2/2016**

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612277-BLK1	Blank	0.5	40					
F612277-BLK2	Blank	0.5	40					
F612277-BLK3	Blank	0.5	40					
F612277-BS1	LCS	0.5	40	1605270	40			
F612277-BSD1	LCS Dup	0.5	40	1605270	40			
F612277-DUP1	Duplicate [1611325-01]	0.517	40					
F612277-MS1	Matrix Spike [1611325-01]	0.535	40	1605712	200			
F612277-MS2	Matrix Spike [1611392-12]	0.549	40	1605712	200			
F612277-MSD1	Matrix Spike Dup [1611325-01]	0.554	40	1605712	200			
F612277-MSD2	Matrix Spike Dup [1611392-12]	0.511	40	1605712	200			

<u>Standard ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>	<u>Reagent ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>
1605270	THg 100ng/mL Primary Spiking Standard	10-Dec-16 00:00	1606137	Omnitrace Hydrochloric Acid	13-Oct-19 00:00
1605712	THg 1,000ng/mL Secondary Spiking Standard	03-Apr-17 00:00	1606188	THg Dilute 1% BrCl	26-Mar-17 00:00
			1606189	THg Washstation (0.5% BrCl)	17-Apr-17 00:00
			1606467	Fisher Nitric Acid, Tracemetal Grade	24-Mar-18 00:00
			1606642	Boiling Chips for AFS prep	10-May-17 00:00
			1606934	25% Hydroxylamine-HCl working solution	29-May-17 00:00
			1606973	5% BrCl	19-Apr-17 00:00
			1607029	3% SnCl2 THg reductant	17-May-17 00:00



PREPARATION BENCH SHEET

F612277

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/2/2016

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-09	NB03SED-CHM336 8678445	0.509	40	-	-	-	Preservation Blank Created Scan all dat	From F611532 by JS on 02-Dec-16
1611325-01	NB03SED-CHM358	0.529	40	-	-	-	Preservation Blank Created Scan all dat	
1611325-02	NB03SED-CHM358C	0.5	40	-	-	-	Preservation Blank Created Scan all dat	
1611325-02RE1	NB03SED-CHM358C	0.5	40	-	-	-	Preservation Blank Created Added 12/6	Added 12/6/2016 by DM2
1611325-04	NB03SED-CHM357	0.548	40	-	-	-	Preservation Blank Created Scan all dat	
1611325-05	NB03SED-CHM356	0.507	40	-	-	-	Preservation Blank Created Scan all dat	
1611325-06	NB03SED-CHM352	0.539	40	-	-	-	Preservation Blank Created Scan all dat	
1611326-01	NB03SED-CHM347	0.508	40	-	-	-	Scan all data for Level IV	
1611326-02	NB03SED-CHM353	0.546	40	-	-	-	Scan all data for Level IV	
1611326-03	NB03SED-CHM348	0.564	40	-	-	-	Scan all data for Level IV	
1611326-04	NB03SED-CHM342	0.533	40	-	-	-	Scan all data for Level IV	
1611326-05	NB03SED-CHM346	0.51	40	-	-	-	Scan all data for Level IV	
1611326-06	NB03SED-CHM351	0.536	40	-	-	-	Scan all data for Level IV	
1611326-07	NB03SED-CHM355	0.515	40	-	-	-	Scan all data for Level IV	
1611326-08	NB03SED-CHM343	0.557	40	-	-	-	Scan all data for Level IV	
1611392-08	NB03SED-CHM362	0.535	40	-	-	-	Scan all data for Level IV	
1611392-09	NB03SED-CHM359	0.501	40	-	-	-	Scan all data for Level IV	
1611392-10	NB03SED-CHM361	0.567	40	-	-	-	Scan all data for Level IV	
1611392-11	NB03SED-CHM360	0.541	40	-	-	-	Scan all data for Level IV	

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Date: 12/8/2016

PREPARATION BENCH SHEET

F612277

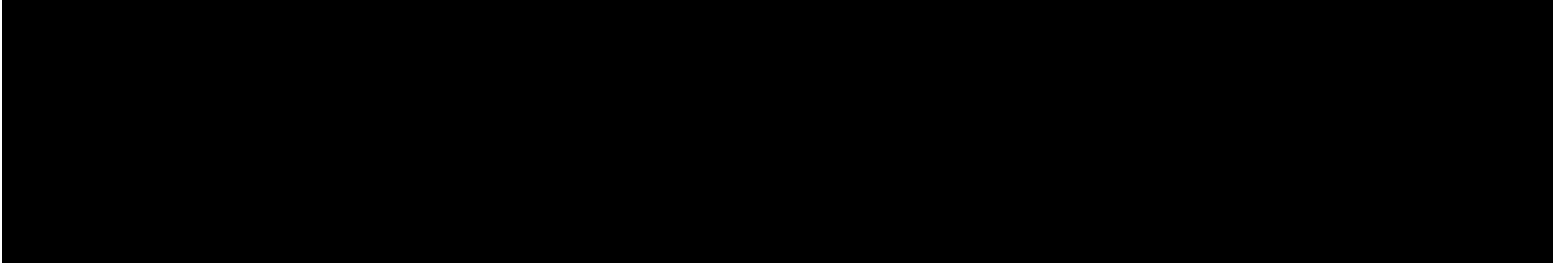
Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/2/2016

1611392-12	NB03SED-CHM363	0.519	40	-	-	-	Scan all data for Level IV	
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PREPARATION BENCH SHEET

200-2  
12/6/16 DM

F611523

Eurofins Frontier Global Sciences, Inc.

Matrix: Water

Prepared using: AFS - EPA 1631E BrCl Oxidation

6607019

Prepared: 11/30/2016

Lab Number	Sample ID and Source Sample	Initial (mL)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F611523-BLK1	Blank	100	101					Source 1611459-08 1X
F611523-BLK2	Blank	100	101					" " 1X
F611523-BLK3	Blank	100	101					" " 1X
F611523-BS1	LCS	50 <sup>SP</sup> 100	50 <sup>SP</sup> 101	1604715	100			1X
F611523-BSD1	LCS Dup	50 <sup>SP</sup> 100	50 <sup>SP</sup> 101	1604715	100			1X
F611523-DUP1	Duplicate 1611459-01	100	101					1X
F611523-MS1	Matrix Spike 1611459-05	100	101	1605272	100			1X
F611523-MS2	Matrix Spike 1611690-02	100	101	1605272	100			1X
F611523-MSD1	Matrix Spike Dup 1611459-05	100	101	1605272	100			1X
F611523-MSD2	Matrix Spike Dup 1611690-02	100	101	1605272	100			1X

Standard ID(s): Description:

Expiration:

BLK 4, 5, 6 Source 1611690-16

BLK 7 Final 105

BLK 8 Final 110

1607029

1606189

1606188

1606994

1606163

PREPARATION BENCH SHEET

200.2  
12/6/16 DM

F611523

Eurofins Frontier Global Sciences, Inc.

Matrix: Water

Prepared using: AFS - EPA 1631E BrCl Oxidation

Prepared: 11/30/2016

Lab Number	Sample ID	Initial (mL)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611459-01	OL-2511-01	100	101	-	-	-	Preservation Blank Created Scan all dat	IX
1611459-03	OL-2511-02	100	101	-	-	-	Preservation Blank Created Scan all dat	IX
1611459-04	OL-2511-03	100	101	-	-	-	Preservation Blank Created Scan all dat	IX
1611459-05	OL-2511-04	100	101	-	-	-	Preservation Blank Created Scan all dat	IX
1611459-06	OL-2511-05	100	101	-	-	-	Preservation Blank Created Scan all dat	IX
1611548-09	TB11152016-01 Water	100	101	-	-	-	Preservation blank created Scan all data	IX
1611551-05	12PS D103A BRINE - Total Hg	100	110	-	-	-		2500X → 100X
1611551-06	12PS D103A BRINE - Dissolved Hg	100	105	-	-	-		2500X → 100X RE
1611552-02	11PS-A BRINE - Total Hg	100	105	-	-	-		2500X → 100X
1611552-03	11PS-A BRINE - Dissolved Hg	100	105	-	-	-		2500X → 100X NOT ANALYZED RE DM 12/7/16
1611600-14	NB316FB	100	101	-	-	-	Preservation Blank Created Scan all dat	IX
1611600-15	TB11172016-01	100	101	-	-	-	Preservation Blank Created Scan all dat	IX
1611690-01	Cullman WWTP Field Blank	100	101	-	-	-		IX
1611690-02	Cullman WWTP Effluent	100	101	-	-	-		IX
1611690-03	Cullman WWTP Duplicate	100	101	-	-	-		IX
1611691-01	BOAZ Sewer Effluent	100	101	-	-	-		IX
1611691-02	BOAZ Sewer Duplicate	100	101	-	-	-		IX
1611691-03	BOAZ Sewer Field Blank	100	101	-	-	-		IX

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Date: 12/5/2016

**PREPARATION BENCH SHEET**

**F611523**

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Water**

**Prepared using: AFS - EPA 1631E BrCl Oxidation**

**Prepared: 11/30/2016**



# Total Mercury Preservation Logbook

**Initial preservation and/or verification**

Technician: B6W Date: 11/22/16 Time Completed: 1605

Work Orders: 1611682, 1611687  
1611685, 1611585, 1611600

**Additional preservation and/or verification (as needed)**

Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_  
 Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_

BrCl LIMS ID: 1606163  
 Pipette SN: MU32229  
 Cal. Date: 11/16/16

Sample ID	Sample Volume (mL)	Reagent added (mL)	Oxidized? Y/N	Additional preservation (as needed)		
				Oxidized? Y/N	Reagent added (mL)	Oxidized? Y/N
1611682-09A	<del>300</del> 600	<del>3.00</del> 6.00	Y			
1611687-01A	240	2.40	Y			
1611685-03A	500	5.00	Y			
1611685-02A	550	5.50	Y			
1611685-01A	500	5.00	Y			
1611685-05A	500	5.00	Y			
1611685-04A	500	5.00	Y			
1611585-03A	600	6.00	Y			
1611600-16A	600	6.00	Y			
1611682-07A	600	6.00	Y			
1611600-14A	600	6.00	Y			
1611585-01A	300	3.00	Y			
* 1611682-08A	125	1.25	Y			
1611585-02A	<del>25</del> 200	<del>2.5</del> 2.00	Y			
1611600-15A	<del>200</del> 125	<del>2.00</del> 1.25	Y			
<p>B6W 11/22/16</p>						

Oxidation with BrCl is confirmed by a yellow color change of the sample and/or a purple color change in KI starch paper.

Comments: \* 1611682-08A was transferred from PP Jar into 250 mL PETG (1611682-08C) on 11/23/16 at 16:20. -LTM 11/23/16

# Total Mercury Preservation Logbook

**Initial preservation and/or verification**

Technician: CSP Date: 11/15/16 Time Completed: 1650

Work Orders: 1611458, 1611459  
1611461, 1611391

**Additional preservation and/or verification (as needed)**

Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_  
Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_

BrCl LIMS ID: 1606163  
Pipette SN: MU32229  
Cal. Date: 11/14/16

Sample ID	Sample Volume (mL)	Reagent added (mL)	Oxidized? Y/N	Additional preservation (as needed)		
				Oxidized? Y/N	Reagent added (mL)	Oxidized? Y/N
1611458-01A	300	3.00	y			
1611458-02A	300	3.00	y			
1611458-03A	300	3.00	y			
1611459-01A	300	3.00	y			
1611459-02A	300	3.00	y			
1611459-03A	600	6.00	y			
1611459-04A	600	6.00	y			
1611459-05A	600	6.00	y			
1611459-06A	600	6.00	y			
1611459-07A	300	3.00	y			
1611459-08A	300	3.00	y			
1611461-15A	300	3.00	y			
1611461-16A	125	1.25	y			
1611461-17A	300	3.00	y			
1611391-05A	125	1.25	y			
1611391-06A	300	3.00	y			
<div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); opacity: 0.5;"> <p>CSP 11/15/16</p> </div>						

Oxidation with BrCl is confirmed by a yellow color change of the sample and/or a purple color change in KI starch paper.

Comments: \_\_\_\_\_  
\_\_\_\_\_

Reviewed

DM

# Total Mercury Preservation Logbook

**Initial preservation and/or verification**

Technician: CSP Date: 11/16/16 Time Completed: 1730

Work Orders: 1611324, 1611498  
1611510

**Additional preservation and/or verification (as needed)**

Technician: BGW Date: 11/17/16 Time Completed: 1330  
Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_

BrCl LIMS ID: 1606163

Pipette SN: MU32229

Cal. Date: 11/16/16

Sample ID	Sample Volume (mL)	Reagent added (mL)	Oxidized? Y/N	Additional preservation (as needed)		
				Oxidized? Y/N	Reagent added (mL)	Oxidized? Y/N
1611324-02B	550	1750	y	N	29.5	Y
1611498-01A	300	3.00	y			
1611498-02A	300	3.00	y			
1611498-03A	300	3.00	y			
1611498-04A	300	3.00	y			
1611498-05B	10	10	y			
1611498-06A	300	3.00	y			
<del>1611498-07A</del> 1611510-01A	600	6.00	y			
1611510-02A	125	1.25	y			
1611510-03A	300	3.00	y			
<div style="border: 1px solid black; width: 100%; height: 100%; transform: rotate(45deg); position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); opacity: 0.5;"></div> <p style="text-align: center; font-size: 2em;">CSP 11/16/16</p>						

CSP  
11/16/16

Oxidation with BrCl is confirmed by a yellow color change of the sample and/or a purple color change in KI starch paper.

Comments: \_\_\_\_\_



# Total Mercury Preservation Logbook

**Initial preservation and/or verification**

Technician: BGW Date: 11/18/16 Time Completed: 1550

1611577, 1611578  
 Work Orders: 1611514, 1611550  
1611502, 1611548, 1611579  
1611576

**Additional preservation and/or verification (as needed)**

Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_

Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_

BrCl LIMS ID: 1606163

Pipette SN: MU32229

Cal. Date: 11/16/16

Sample ID	Sample Volume (mL)	Reagent added (mL)	Oxidized? Y/N	Additional preservation (as needed)		
				Oxidized? Y/N	Reagent added (mL)	Oxidized? Y/N
1611514-21A	300	3.00	Y			
1611502-03A	300	3.00	Y			
1611502-04A	300	3.00	Y			
1611502-07A	300	3.00	Y			
1611502-07A	300	3.00	Y			
1611548-10A	300	3.00	Y			
1611548-09B	125	1.25	Y			
1611550-01A	300	3.00	Y			
1611579-03A	600	6.00	Y			
1611579-04A	600	6.00	Y			
1611579-05A	600	6.00	Y			
1611579-06A	600	6.00	Y			
1611579-01A	600	6.00	Y			
1611579-02A	600	6.00	Y			
1611582-02A	600	6.00	Y			
1611582-03A	600	6.00	Y			
1611582-01A	600	6.00	Y			
1611581-01A	600	6.00	Y			
1611581-02A	600	6.00	Y			
1611581-03A	600	6.00	Y			
1611580-01A	600	6.00	Y			
1611580-03A	600	6.00	Y			
1611580-02A	600	6.00	Y			
1611576-01A	500	5.00	Y			
<del>1611576-</del>	500	5.00	Y			
<del>1611576-</del>	500	5.00	Y			

Oxidation with BrCl is confirmed by a yellow color change of the sample and/or a purple color change in KI starch paper.

Comments: → 1611577-01A → 1611578-01A  
BGW 11/18/16 BGW 11/18/16

Total Mercury Preservation Logbook

Technician: LM Date: 11/29/16 Time Completed: 17:10  
 Initial preservation and/or verification  
 Technician: BSW Date: 11/29/16 Time Completed: 8:45  
 Additional preservation and/or verification (as needed)  
 Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_  
 BrCl LIMS ID: 1606163  
 Pipette SN: MU32229  
 Cal. Date: 11/23/16

Sample ID	Sample Volume (ml)	Reagent added (ml)	Oxidized? Y/N	Additional preservation (as needed)	Oxidized? Y/N	Reagent added (ml)	Oxidized? Y/N
-----------	--------------------	--------------------	---------------	-------------------------------------	---------------	--------------------	---------------

1611690-01A	6.00	6.00	Y				
1611690-02A	6.00	6.00	Y				
1611690-03A	6.00	6.00	Y				
1611691-01A	6.00	6.00	Y				
1611691-02A	6.00	6.00	Y				
1611691-03A	6.00	6.00	Y				
1611729-01A	3.00	3.00	Y				
1611729-02A	3.00	3.00	Y				
1611729-03A	3.00	3.00	Y				
1611729-04A	3.00	3.00	Y				
1611729-05B	10.00	10.00	Y				
1611729-06A	3.00	3.00	Y				
1611731-01A	6.00	6.00	Y				
1611731-02A	6.00	6.00	Y				
1611731-03A	6.00	6.00	Y				
1611731-04A	6.00	6.00	Y				
1611731-05A	6.00	6.00	Y				
1611731-06A	6.00	6.00	Y				
1611731-07A	6.00	6.00	Y				
1611731-08A	6.00	6.00	Y				
1611731-10A	6.00	6.00	Y				

Oxidation with BrCl is confirmed by a yellow color change of the sample and/or a purple color change in KI starch paper.

Comments: 1611729-05B was taken as 50/50 split from  
 10ml of sample combined with 10ml BrCl in a  
 20 ml glass vial - LM 11/23/16

Reviewed  
 11/29/16  
 DM

# Total Mercury Preservation Logbook

**Initial preservation and/or verification**

Technician: CSF Date: 11/29/16 Time Completed: 1530

Work Orders: 1611551, 1611775  
1611552, 1611804, 1611684

**Additional preservation and/or verification (as needed)**

Technician: R Date: 12/5/16 Time Completed: 14:00

BrCl LIMS ID: 1606163 ✓

Technician: \_\_\_\_\_ Date: \_\_\_\_\_ Time Completed: \_\_\_\_\_

Pipette SN: MU32229 ✓

Cal. Date: 11/23/16

Sample ID	Sample Volume (mL)	Reagent added (mL)	Oxidized? Y/N	Additional preservation (as needed)		
				Oxidized? Y/N	Reagent added (mL)	Oxidized? Y/N
1611551-10A	250	2.50	y			
1611552-06A	250	2.50	y			
1611775-01A	300	3.00	y			
1611775-02A	300	3.00	y			
1611775-03A	300	3.00	y			
1611775-04A	300	3.00	y			
1611551-05A	300	3.00 + 12.00 + 15.00	y	y	15.00	y
1611551-06A	130	1.30 + 5.20	y			
1611552-02A	300	3.00	y			
1611552-03A	130	1.30 + 1.30	y	y	3.90	y
1611804-01A	<del>300</del> <sup>325</sup> CSF 11/29/16	<del>3.00</del> <sup>3.25</sup> CSF 11/29/16	y			
1611804-02A	300	3.00	y			
1611804-03A	600	6.00	y			
1611804-04A	600	6.00	y			
1611804-05A	600	6.00	y			
1611804-06A	540	5.40	y			
1611804-07A	300	3.00	y			
1611804-08A	300	3.00	y			
1611684-01A	300	3.00	y			
1611684-02A	300	3.00	y			
1611684-03A	300	3.00	y			
1611684-04A	300	3.00	y			
1611684-05A	300	3.00	y			
1611684-06A	300	3.00	y			
1611684-07A	300	3.00	y			
1611684-08A	300	3.00	y			

Oxidation with BrCl is confirmed by a yellow color change of the sample and/or a purple color change in KI starch paper.

Comments: \_\_\_\_\_

11/29/16

PREPARATION BENCH SHEET

2002  
12/6/16 DM

F612277

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/2/2016

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612277-BLK1	Blank	0.5	40					20X
F612277-BLK2	Blank	0.5	40					20X
F612277-BLK3	Blank	0.5	40					20X
F612277-BS1	LCS	0.5	40	1605270	40			20X
F612277-BSD1	LCS Dup	0.5	40	1605270	40			20X
F612277-DUP1	Duplicate [1611325-01]	0.517	40					1000X
F612277-MS1	Matrix Spike [1611325-01]	0.535	40	1605712	200			1000X
F612277-MS2	Matrix Spike [1611392-12]	0.549	40	1605712	200			1000X
F612277-MSD1	Matrix Spike Dup [1611325-01]	0.554	40	1605712	200			1000X
F612277-MSD2	Matrix Spike Dup [1611392-12]	0.511	40	1605712	200			1000X

<u>Standard ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>	<u>Reagent ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>
1605270	THg 100ng/mL Primary Spiking Standard	10-Dec-16 00:00	1606137	Omnitrace Hydrochloric Acid	13-Oct-19 00:00
1605712	THg 1,000ng/mL Secondary Spiking Standard	03-Apr-17 00:00	1606467	Fisher Nitric Acid, Tracemetal Grade	24-Mar-18 00:00
			1606642	Boiling Chips for AFS prep	10-May-17 00:00
			1606973	5% BrCl	19-Apr-17 00:00

1607020  
1606189  
1606934  
1606188

PREPARATION BENCH SHEET

200.2

F612277

12/2/16 DM

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/2/2016

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-09	NB03SED-CHM336 8678445	0.509	40	-	-	-	Preservation Blank Created Scan all dat	From F611532 by JS on 02-Dec-16 1000X
1611325-01	NB03SED-CHM358	0.529	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611325-02	NB03SED-CHM358C	0.5	40	-	-	-	Preservation Blank Created Scan all dat	1000X → 20X
1611325-04	NB03SED-CHM357	0.548	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611325-05	NB03SED-CHM356	0.507	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611325-06	NB03SED-CHM352	0.539	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611326-01	NB03SED-CHM347	0.508	40	-	-	-	Scan all data for Level IV	1000X
1611326-02	NB03SED-CHM353	0.546	40	-	-	-	Scan all data for Level IV	1000X
1611326-03	NB03SED-CHM348	0.564	40	-	-	-	Scan all data for Level IV	1000X
1611326-04	NB03SED-CHM342	0.533	40	-	-	-	Scan all data for Level IV	1000X
1611326-05	NB03SED-CHM346	0.51	40	-	-	-	Scan all data for Level IV	1000X
1611326-06	NB03SED-CHM351	0.536	40	-	-	-	Scan all data for Level IV	1000X
1611326-07	NB03SED-CHM355	0.515	40	-	-	-	Scan all data for Level IV	1000X
1611326-08	NB03SED-CHM343	0.557	40	-	-	-	Scan all data for Level IV	1000X
1611392-08	NB03SED-CHM362	0.535	40	-	-	-	Scan all data for Level IV	1000X
1611392-09	NB03SED-CHM359	0.501	40	-	-	-	Scan all data for Level IV	1000X
1611392-10	NB03SED-CHM361	0.567	40	-	-	-	Scan all data for Level IV	1000X
1611392-11	NB03SED-CHM360	0.541	40	-	-	-	Scan all data for Level IV	1000X
1611392-12	NB03SED-CHM363	0.519	40	-	-	-	Scan all data for Level IV	1000X

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Date: 12/8/2016

**PREPARATION BENCH SHEET**

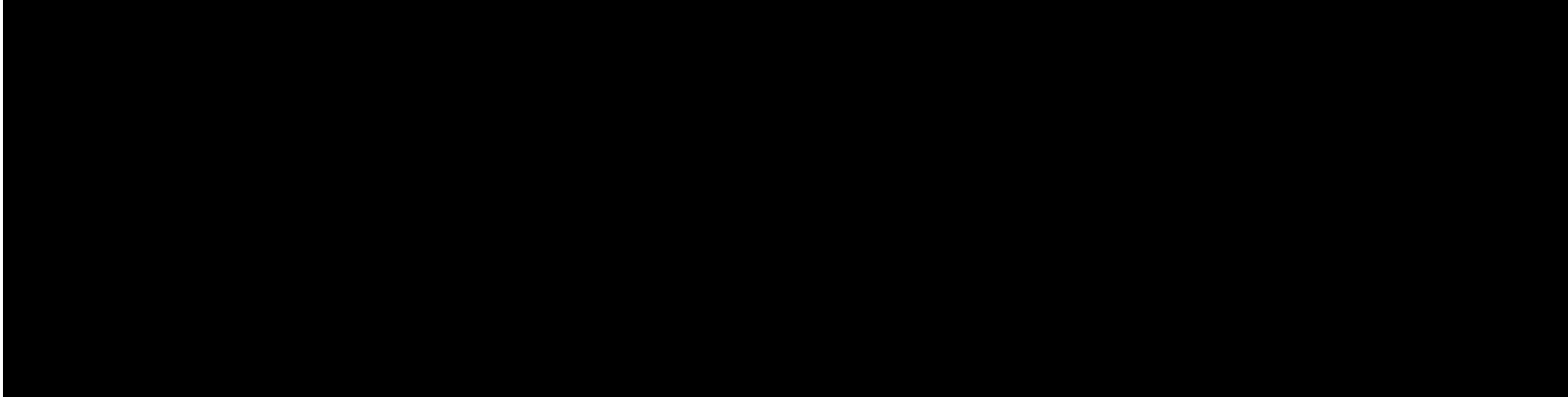
F612277

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg**

**Prepared: 12/2/2016**



PREPARATION BENCH SHEET

200.2  
12/1/16 DM

F611534

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/1/2016

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F611534-BLK1	Blank	0.5	40					20x
F611534-BLK2	Blank	0.5	40					20x
F611534-BLK3	Blank	0.5	40					20x
F611534-BS1	LCS	0.5	40	1605270	40			20x
F611534-BSD1	LCS Dup	0.5	40	1605270	40			20x
F611534-DUP1	Duplicate [1611249-07]	0.5808	40					1000x
F611534-MS1	Matrix Spike [1611249-07]	0.565	40	1605712	200			1000x
F611534-MS2	Matrix Spike [1611323-01]	0.5495	40	1605712	200			1000x
F611534-MSD1	Matrix Spike Dup [1611249-07]	0.5289	40	1605712	200			1000x
F611534-MSD2	Matrix Spike Dup [1611323-01]	0.5674	40	1605712	200			1200x

<u>Standard ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>	<u>Reagent ID(s):</u>	<u>Description:</u>	<u>Expiration:</u>
1605270	THg 100ng/mL Primary Spiking Standard	10-Dec-16 00:00	1606137	Omnitrace Hydrochloric Acid	13-Oct-19 00:00
1605712	THg 1,000ng/mL Secondary Spiking Standard	03-Apr-17 00:00	1606467	Fisher Nitric Acid, Tracemetal Grade	24-Mar-18 00:00
			1606642	Boiling Chips for AFS prep	10-May-17 00:00
			1606973	5% BrCl	19-Apr-17 00:00

1606189  
1606188  
1606934  
1606163

PREPARATION BENCH SHEET

2000.2

12/1/16 DM

F611534

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/1/2016

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-12	NB03SED-CHM333 8678451	0.5642	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611242-13	NB03SED-CHM334 8678453	0.5066	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611242-14	NB03SED-CHM390 8678455	0.5523	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611249-01	NB03SED-CHM332 8680694	0.5424	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611249-02	NB03SED-CHM381 8680696	0.519	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611249-03	NB03SED-CHM328 8680698	0.5373	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611249-04	NB03SED-CHM327 8680700	0.5915	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611249-05	NB03SEDDUP-11 8680702	0.5308	40	-	-	-	Preservation Blank Created Scan all dat	1000X → 2500X
1611249-06	NB03SED-CHM380 8680704	0.5408	40	-	-	-	Preservation Blank Created Scan all dat	1000X → 1000X
1611249-07	NB03SED-CHM326 8680708	0.5485	40	QC	-	-	MS/MSD Scan all data for Level IV	1000X
1611249-08	NB03SED-CHM326 DUP 8680711	0.5097	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611249-09	NB03SED-CHM341 8680713	0.5261	40	-	-	-	Preservation Blank Created Scan all dat	1000X
1611323-01	W-61-HIGH_110816_SED_03	0.5162	40	-	-	-		1000X
1611323-02	W-61-INT_110816_SED_03	0.574	40	-	-	-		1000X
1611323-03	W-61-LOW_110816_SED_03	0.5089	40	-	-	-		1000X
1611323-04	W-61-MID_110816_SED_03	0.5512	40	-	-	-		1000X
1611323-05	W-63-HIGH_110816_SED_03	0.5384	40	-	-	-		1000X → 100X
1611323-06	W-63-INT_110816_SED_03	0.5758	40	-	-	-		1000X
1611323-07	W-63-LOW_110816_SED_03	0.5556	40	-	-	-		1000X

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Date: 12/8/2016



PREPARATION BENCH SHEET

2000-2

12/1/16 DM

F611534

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: AFS - EFGS-066 Cold Aqua Regia Digestion for Hg

Prepared: 12/1/2016

1611323-08	W-63-MID_110816_SED_03	0.5734	40	-	-	-	1000x
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Technician: JS Batch#: FG12277 Date: 12/2/16

- EFGS-010 Tissues - Methyl Mercury - KOH/Methanol: Hot plate 75±5°C for 2-4 hours.
- EFGS-011 Tissues - Total Mercury - 70:30: Hot plate 75±5°C for two hours.
- EFGS-045 Sediments - Methyl Mercury - KBr/CH<sub>2</sub>Cl<sub>2</sub>: Heat Block 45°C (nitrogen purge for 30 minutes).
- EFGS-066 Solids - Total Mercury - Cold AR: 18-25°C for over four hours.

Other: \_\_\_\_\_ Vial Type:  Glass  Teflon

Balance#: 6 Calibrated?  Yes  No Therm.#: N/A Calibrated?  Yes  No

Time in: N/A Actual Temp. (raw): N/A °C w/ CF: N/A °C

Time out: N/A Actual Temp. (raw): N/A °C w/ CF: N/A °C

Final vol.: 40 mL (LIMS ID: 1606973) Spike vol.: 200 µL (LIMS ID: 1605712)

Spike Witness: AMB B/2/16 (initial and date)

HCl LIMS ID: 1606137 Pipette SN#: MU11619 Calibration Date: 11/28/14

HNO<sub>3</sub> LIMS ID: 1606467 Pipette SN#: N/A Calibration Date: N/A

70/30 LIMS ID: N/A Dispenser #: 08Y2293 Calibrated?  Yes  No

Other Acid LIMS ID: N/A Other Reagent/LIMS IDs: 09N45351, 02Z2159

Centrifuge Tube lot # 00066279 Boiling Chip lot # 1606642 \*Hotblock Position: N/A

Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> g	Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> g	CRM LIMS ID <input checked="" type="checkbox"/> NA
1	F612277-BLK1	0.500	23	1611326-08	0.557	
2	F612277-BLK2	0.533	24	1611392-08	0.535	
3	F612277-BLK3	0.514	25	1611392-09	0.501	
4	F612277-B51	0.515	26	1611392-10	0.567	
5	F612277-B52	0.521	27	1611392-11	0.541	
6	1611242-09	0.509	28	1611392-12	0.519	
7	1611325-01	0.529	29	F612277-MS2(1611392-12)	0.549	
8	F612277-DUP1(1611325-01)	0.517	30	F612277-MS2(1611392-12)	0.511	
9	F612277-MS1(1611325-01)	0.535	31			
10	F612277-MS01(1611325-01)	0.554	32			
11	1611325-02	0.500	33			
12	<del>1611325-03</del> <sup>12/5/16 JS</sup>	<del>0.502</del> <sup>12/5/16 JS</sup>	34			
13	1611325-04	0.548	35			
14	1611325-05	0.507	36			
15	1611325-06	0.539	37			
16	<del>1611326-01</del>	0.508	38			
17	<del>1611326-02</del>	0.546	39			
18	1611326-03	0.564	40			
19	1611326-04	0.533	41			
20	1611326-05	0.510	42			
21	1611326-06	0.536	43			
22	1611326-07	0.515	44			

Comments

B51/B501

40µL of 1000µg/mL

1605270

12/2/16 JS

Removed 1611325-03 from the batch. Sample spilled over vial after filling with HCl 12/2/16 JS

Technician: AMB/JS Batch#: F611534 Date: 12-1-16

- EFGS-010 Tissues - Methyl Mercury - KOH/Methanol: Hot plate 75±5°C for 2-4 hours.
- EFGS-011 Tissues - Total Mercury - 70:30: Hot plate 75±5°C for two hours.
- EFGS-045 Sediments - Methyl Mercury - KBr/CH<sub>2</sub>Cl<sub>2</sub>: Heat Block 45°C (nitrogen purge for 30 minutes).
- EFGS-066 Solids - Total Mercury - Cold AR: 18-25°C for over four hours.

Vial Type:  Glass  Teflon

Other: \_\_\_\_\_  
 Balance#: 19 Calibrated?  Yes  No Therm.#: N/A Calibrated?  Yes  No

Time in: N/A Actual Temp. (raw): N/A °C w/ CF: N/A °C  
 Time out: N/A Actual Temp. (raw): N/A °C w/ CF: N/A °C

Final vol.: 40 mL (LIMS ID: 1606973) Spike vol.: 200 µL (LIMS ID: 1605712)  
 Spike Witness: PC 12/1/16 (initial and date) BS1/BSD1: 40 ml of 1605270

HCl LIMS ID: 160637 Pipette SN#: MU11607 Calibration Date: 11/28/16  
 HNO<sub>3</sub> LIMS ID: 160667 Pipette SN#: N/A Calibration Date: N/A  
 70/30 LIMS ID: N/A Dispenser #: 08Y2293 Calibrated?  Yes  No  
 Other Acid LIMS ID: N/A Other Reagent/LIMS IDs: 09N45351, 02Y2159, 02Z2159  
 Centrifuge Tube lot #: 00066064 Boiling Chip lot #: 1606642 \*Hotblock Position: N/A

Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> µg	Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> µg	CRM LIMS ID <input checked="" type="checkbox"/> N/A
1	F611534-BLK1	0.5744	23	F611534-MSD2	0.5674	
2	F611534-BLK2	0.5015	24	1611323-02	0.5740	
3	F611534-BLK3	0.5429	25	1611323-03	0.5089	
4	F611534-BS1	0.5051	26	1611323-04	0.5512	
5	F611534-BSD1	0.5075	27	1611323-05	0.5384	F611534 -
6	1611242-12	0.5642	28	1611323-06	0.5758	DUPI, MSI,
7	1611242-13	0.5066	29	1611323-07	0.5556	MSD1:
8	1611242-14	0.5523	30	1611323-08	0.5734	1611249-07
9	1611249-01	0.5424	31			F611534 -
10	1611249-02	0.5190	32			MS2, MSD2
11	1611249-03	0.5373	33			1611323-01
12	1611249-04	0.5915	34			AMB 12-1-16
13	1611249-05	0.5308	35			Samples
14	1611249-06	0.5408	36			1611242-12,
15	1611249-07	0.5485	37			-13 appeared
16	F611534-DUPI	0.5808	38			to have some
17	F611534-MSI	0.5650	39			hydrocarbon
18	F611534-MSD1	0.5289	40			in them.
19	1611249-08	0.5097	41			Sample
20	1611249-09	0.5261	42			1611249-02
21	1611323-01	0.5162	43			had a large
22	F611534-MS2	0.5495	44			worm type.

AMB 12-1-16

Eurofins Frontier Global Sciences / Mercury Sample Digestions (LOG-HG-013.13) / Effective 05/25/16 / QA2016-066  
 \*Hotblock diagram located in back of logbook  
 1611242 and 1611249 had whole seashells in it. AMB 12-1-16  
 Also very rocky with seashells. AMB 12-1-16  
 1611242 and 1611249 had whole seashells in it. AMB 12-1-16  
 Some samples with hydrocarbons. AMB 12-1-16



Peer Review Check List for THg by 2600 CV-AFS (SOP2822) 2016 Rev 1 (04/1/2016)

Analyst:	DON MORAN	Sequence(s) #:	6L07020, 6L07019
Reviewer:	0 <i>DM</i>	Dataset ID(s):	THG26002-161206-1
Date:	12/7/2016	WO (s) #:	VARIOUS
Batch #(s):	F611534, F611523, F612277		0

Analyst Initials *DM*

Reviewer Initials *DM*

- |  |  |  |   |                                     |
|--|--|--|---|-------------------------------------|
| 5b. Has the B/C section data been uploaded?  | <input type="checkbox"/> YES                                     | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| <b>QA/QC Data Checked</b>  |  |  |   |                                     |
| 6. RSD CF ( $\leq 15\%$ )  | <input checked="" type="checkbox"/> PASS                         | <input type="checkbox"/> FAIL          |   | <input checked="" type="checkbox"/> |
| Comments:  |  |  |   |                                     |
| 7. The calibration curve included a minimum of 5 Standards   | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            |   | <input checked="" type="checkbox"/> |
| Comments:  |  |  |   |                                     |
| 8. 1st Calibration Standard % Recoveries EPA 1631E (75-125%)   | <input checked="" type="checkbox"/> PASS                         | <input type="checkbox"/> FAIL          |   | <input type="checkbox"/>            |
| 9. ICV and CCV % Recoveries EPA 1631E (77-123%)  | <input checked="" type="checkbox"/> PASS                         | <input type="checkbox"/> FAIL          |   | <input checked="" type="checkbox"/> |
| Comments:  |  |  |   |                                     |
| 10. Do all calibration points pass acceptance criteria?  | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            |   | <input checked="" type="checkbox"/> |
| Comments:  |  |  |   |                                     |
| 11. Are qualifiers consistent with the data review flowcharts?   | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| Comments:  |  |  |   |                                     |
| 12. Explain any items on the failed data report from Element   |  |  |   | <input checked="" type="checkbox"/> |
| Comments:  | <i>1611249-04 HIGH SAMPLE. ABOVE CAL5. F612277-MSD2 HIGH RPD</i> |  |   |                                     |
| 13. Are the individual Preparation Blanks < PQL or <2.2xMDL for WI (refer to appropriate prep method PQL list) | <input checked="" type="checkbox"/> PASS                         | <input type="checkbox"/> FAIL          |   | <input checked="" type="checkbox"/> |
| (a) If not < PQL or <2.2xMDL for WI, note which PB(s) are above control limit:                                 |  |  |   |                                     |
| (b) Is the mean PB < PQL or <2.2xMDL for WI (for appropriate qualification)?                                   | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            |   | <input checked="" type="checkbox"/> |
| (c) Was a BrCl Blank analyzed for each preservation level?   | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| (d) Are Preparation Blanks summarized on QC page?  | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            |   | <input checked="" type="checkbox"/> |
| 14. Filtration Blank Prepared (if yes, use FB qualifier)   | <input type="checkbox"/> YES                                     | <input checked="" type="checkbox"/> NO |   | <input checked="" type="checkbox"/> |
| (a) Filtration Blank prep date same as associated samples' prep date   | <input type="checkbox"/> YES                                     | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| (b) Filtration Blank absolute value < PQL or <2.2xMDL for WI   | <input type="checkbox"/> YES                                     | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| 15. IBLs (3 minimum) individually < 0.50 ng/L, mean < 0.25 ng/L and STD of 0.10 ng/L?                          | <input checked="" type="checkbox"/> PASS                         | <input type="checkbox"/> FAIL          |   | <input checked="" type="checkbox"/> |
| Comments:  |  |  |   |                                     |
| 16. CCBs individually < 0.50 ng/L or 2.2 x MDL for WI?   | <input checked="" type="checkbox"/> PASS                         | <input type="checkbox"/> FAIL          |   | <input checked="" type="checkbox"/> |
| Comments:  |  |  |   |                                     |
| 17. Have Total Solids been applied? (if NO, please ensure that they are done or nearly done)                   | <input type="checkbox"/> YES                                     | <input type="checkbox"/> NO            | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| 18. Is the correct 'Source' designated for MD/MS/MSD?  | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            |   | <input checked="" type="checkbox"/> |
| 19. For digested preps: was there a spike witness signature & date on the prep bench sheet?                    | <input checked="" type="checkbox"/> YES                          | <input type="checkbox"/> NO            | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |

**Peer Review Check List for THg by 2600 CV-AFS (SOP2822) 2016 Rev 1 (04/1/2016)**

Analyst:	DON MORAN	Sequence(s) #:	6L07020, 6L07019
Reviewer:	0 <i>DM</i>	Dataset ID(s):	THG26002-161206-1
Date:	12/7/2016	WO (s) #:	VARIOUS
Batch #(s):	F611534, F611523, F612277		0

Analyst Initials DM

Reviewer Initials DM

- |  |  |                               |   |                                     |
|--|--|-------------------------------|---|-------------------------------------|
| 20. MS/MSD Spiked at least 1-5 X ambient or 5x MRL (whichever is higher) ?   | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input checked="" type="checkbox"/>     |                                     |
| Comments: _____  |  |                               |   |                                     |
| 21. Are all samples within instrument calibration range? (or at minimum dilution size)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input checked="" type="checkbox"/>     |                                     |
| Comments: _____  |  |                               |   |                                     |
| 22. Are the samples run at the correct dilution level for the method?  | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input checked="" type="checkbox"/>     |                                     |
| Comments: _____  |  |                               |   |                                     |
| 23. Dissolved < Total (if applicable)  | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| Comments: _____  |  |                               |   |                                     |
| 24. Effluent < Influent (visually confirm if needed)   | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| Comments: _____  |  |                               |   |                                     |
| 25. Are re-runs noted with reason?   | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| Comments: <u>1611551-05, 06 AND 1611552-02, 03 WERE NOT RE-ANALYZED . WILL BE DONE ON 12/8.</u>  |  |                               |   |                                     |
| 26. FSTM Datasets: Check to ensure the 'Response' & 'Initial Result' columns match in both the Excel dataset & LIMS for the FSTM A (in sequence) & B/C (in batch) traps? | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| Comments: _____  |  |                               |   |                                     |
| 27. Is the B trap <5% A Traps  | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| Comments: _____  |  |                               |   |                                     |
| 28. Are spiked trap recoveries 75-125% of true value?  | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| Comments: _____  |  |                               |   |                                     |
| 29. Have non-reportable samples been imported into LIMS and clicked to non-reportable?   | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| Comments: _____  |  |                               |   |                                     |
| 30. Have re-extracts been created for non-reportable samples?  | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| 31. Are there any HIGH QA projects within the data? If so, place data package in QA office before scanning.  | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| 32. Does the data set need scanning?   | <input checked="" type="checkbox"/> YES  |                               | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| 33. Does the dataset have an LOQ/LOQ or DOC?   | <input type="checkbox"/> YES             |                               | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> |
| 34. Water samples: has the preservation log been included in dataset for final volume verification?  | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| 35. Water samples-is the final volume correct in the sequence?   | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO   | <input type="checkbox"/> N/A            | <input checked="" type="checkbox"/> |
| <u>Files located at: \\Cuprum\gen_admin\Quality Assurance\Training Master\DOCs</u>   |  |                               |   |                                     |
| 36. Date of analyst IDOC/CDOC: _____ 1/18/16, 12/16/15 _____ IDOC/CDOC within last 12 months?  | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   |   | <input checked="" type="checkbox"/> |
| 37. Date of analyst's SOP reading for method: _____ 5/20/2016 _____ Current SOP revision read?   | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   |   | <input checked="" type="checkbox"/> |
| 38. Date of LOD: _____ 6/15/16, 7/8/16 _____ LOD within last 3 months?   | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   |   | <input checked="" type="checkbox"/> |
| 39. Date of LOQ: _____ 6/15/16, 7/8/16 _____ LOQ within last 3 months?   | <input type="checkbox"/> YES             | <input type="checkbox"/> NO   |   | <input checked="" type="checkbox"/> |

**Data can not be reported without a current IDOC/CDOC, LOD or LOQ.**



*Analysis Datasheet for Methyl Mercury in Soil/Tissue*

Date of Analysis: December 07, 2016

Analyst: RN

Instrument #: Hg2700-1

Units ng/L

LIMS Sequence #: 6L08027

**Calibration Statistics:**

LabNumber	n	True Val	Area	Uncorrected Response Factor	Corrected Peak Height	Corrected Response Factor	% Recovery
SEQ-CAL1	1	0.05 ng/L	26.72 units	534.45	26.72 units	534.45	91.8 %Rec
SEQ-CAL2	1	0.20 ng/L	123.85 units	619.24	123.85 units	619.24	106.3 %Rec
SEQ-CAL3	1	1.00 ng/L	542.89 units	542.89	542.89 units	542.89	93.2 %Rec
SEQ-CAL4	1	2.00 ng/L	1244.78 units	622.39	1244.78 units	622.39	106.9 %Rec
SEQ-CAL5	1	4.00 ng/L	2373.86 units	593.47	2373.86 units	593.47	101.9 %Rec
SEQ-CAL6	0						
SEQ-CAL7	0						
SEQ-CAL8	0						
SEQ-CAL9	0						

**Corr. Mean RF**    **Corr. St Dev RF**    **Corr. RSD CF**    **Uncorr. Mean RF**  
 582.49            +/- 41.65            7.2% RSD            582.49

**Blanks:**

LabNumber	n	Mean	Std Dev	Mean (ng/L)	Std Dev (ng/L)
SEQ-IBL	1	0.00 units		0.00 ng/L	#VALUE!

**Preparation Blanks**

Sample Type	Batch ID	n	Mean	Std Dev
BLK	1	3	0.019 ng/L	±0.003
BLK	2	3	0.014 ng/L	±0.002
BLK	3	0	0.000 ng/L	
BLK	4	0	0.000 ng/L	
BLK	5	0	0.000 ng/L	

QUALITY ASSURANCE

PEER - REVIEWED

INITIALS: *rn* 12/9/16



Instrument	Analyst	Sample		Dilution	Analyzed	FileID	Run End	Uncorrected Response	Batch ID	No PB Correction?	RESP	InitialResult	FinalResult	InitialUnits	Comments
		Type	LabNumber												
Hg2700-1	RN	CAL	SEQ-IBL1	1	12/7/16 20:52	18789-1.RAW	20:52:01	0.00			0.0	0.000	0.000	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL1	1	12/7/16 21:02	18790-1.RAW	21:02:34	26.72			26.7	0.046	0.046	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL2	1	12/7/16 21:13	18791-1.RAW	21:13:05	123.85			123.8	0.213	0.213	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL3	1	12/7/16 21:23	18792-1.RAW	21:23:36	542.89			542.9	0.932	0.932	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL4	1	12/7/16 21:34	18793-1.RAW	21:34:07	1244.78			1244.8	2.137	2.137	ng/L	
Hg2700-1	RN	CAL	SEQ-CAL5	1	12/7/16 21:44	18794-1.RAW	21:44:37	2373.86			2373.9	4.075	4.075	ng/L	
Hg2700-1	RN	CAL	SEQ-ICV1	1	12/7/16 21:55	18795-1.RAW	21:55:08	304.41			304.4	0.523	0.523	ng/L	
Hg2700-1	RN	CAL	SEQ-ICB1	1	12/7/16 22:05	18796-1.RAW	22:05:40	10.26			10.3	0.018	0.018	ng/L	
Hg2700-1	RN	BLK	F612292-BLK4	1	12/7/16 22:16	18797-1.RAW	22:16:11	12.68	1		12.7	0.022	0.022	ng/L	
Hg2700-1	RN	BLK	F612292-BLK5	1	12/7/16 22:26	18798-1.RAW	22:26:42	8.99	1		9.0	0.015	0.015	ng/L	
Hg2700-1	RN	BLK	F612292-BLK6	1	12/7/16 22:37	18799-1.RAW	22:37:13	11.52	1		11.5	0.020	0.020	ng/L	
Hg2700-1	RN	SAM	1611323-03RE1	10	12/7/16 22:47	18800-1.RAW	22:47:43	855.84	1		855.8	1.467	14.674	ng/L	
Hg2700-1	RN	SAM	1611323-04RE1	10	12/7/16 22:58	18801-1.RAW	22:58:14	382.06	1		382.1	0.654	6.540	ng/L	
Hg2700-1	RN	SAM	1611323-05RE1	1	12/7/16 23:08	18802-1.RAW	23:08:45	237.78	1		237.8	0.389	0.389	ng/L	
Hg2700-1	RN	SAM	1611323-06RE1	10	12/7/16 23:19	18803-1.RAW	23:19:15	425.43	1		425.4	0.728	7.285	ng/L	
Hg2700-1	RN	SAM	1611323-07RE1	1	12/7/16 23:29	18804-1.RAW	23:29:46	2005.56	1		2005.6	3.424	3.424	ng/L	
Hg2700-1	RN	SAM	1611323-08RE1	10	12/7/16 23:40	18805-1.RAW	23:40:17	534.26	1		534.3	0.915	9.153	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV1	1	12/7/16 23:50	18806-1.RAW	23:50:48	277.82			277.8	0.477	0.477	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB1	1	12/8/16 0:01	18807-1.RAW	0:01:18	9.09			9.1	0.016	0.016	ng/L	
Hg2700-1	RN	BLK	F612322-BLK1	1	12/8/16 0:11	18808-1.RAW	0:11:49	9.20	2		9.2	0.016	0.016	ng/L	
Hg2700-1	RN	BLK	F612322-BLK2	1	12/8/16 0:22	18809-1.RAW	0:22:20	7.15	2		7.2	0.012	0.012	ng/L	
Hg2700-1	RN	BLK	F612322-BLK3	1	12/8/16 0:32	18810-1.RAW	0:32:51	7.33	2		7.3	0.013	0.013	ng/L	
Hg2700-1	RN	SAM	F612322-BS1	10	12/8/16 0:43	18811-1.RAW	0:43:21	332.89	2		332.9	0.570	5.701	ng/L	
Hg2700-1	RN	SAM	F612322-BSD1	10	12/8/16 0:53	18812-1.RAW	0:53:52	442.37	2		442.4	0.758	7.581	ng/L	
Hg2700-1	RN	SAM	F612322-DUP1	1	12/8/16 1:04	18813-1.RAW	1:04:23	340.20	2		340.2	0.570	0.570	ng/L	
Hg2700-1	RN	SAM	F612322-MS1	10	12/8/16 1:14	18814-1.RAW	1:14:53	590.61	2		590.6	1.013	10.126	ng/L	
Hg2700-1	RN	SAM	F612322-MSD1	10	12/8/16 1:25	18815-1.RAW	1:25:24	731.07	2		731.1	1.254	12.537	ng/L	
Hg2700-1	RN	SAM	F612322-MS2	10	12/8/16 1:35	18816-1.RAW	1:35:55	560.25	2		560.3	0.960	9.605	ng/L	
Hg2700-1	RN	SAM	F612322-MSD2	10	12/8/16 1:46	18817-1.RAW	1:46:26	567.39	2		567.4	0.973	9.727	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV2	1	12/8/16 1:56	18818-1.RAW	1:56:56	241.15			241.1	0.414	0.414	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB2	1	12/8/16 2:07	18819-1.RAW	2:07:27	8.34			8.3	0.014	0.014	ng/L	
Hg2700-1	RN	SAM	1611325-01	1	12/8/16 2:17	18820-1.RAW	2:17:57	440.48	2		440.5	0.743	0.743	ng/L	
Hg2700-1	RN	SAM	1611325-02	1	12/8/16 2:28	18821-1.RAW	2:28:28	17.99	2		18.0	0.017	0.017	ng/L	
Hg2700-1	RN	SAM	1611325-03	125	12/8/16 2:38	18822-1.RAW	2:38:59	655.31	2		655.3	1.125	140.614	ng/L	
Hg2700-1	RN	SAM	1611325-04	1	12/8/16 2:49	18823-1.RAW	2:49:29	303.99	2		304.0	0.508	0.508	ng/L	
Hg2700-1	RN	SAM	1611325-05	1	12/8/16 3:00	18824-1.RAW	3:00:00	371.53	2		371.5	0.624	0.624	ng/L	
Hg2700-1	RN	SAM	1611325-06	1	12/8/16 3:10	18825-1.RAW	3:10:31	416.24	2		416.2	0.701	0.701	ng/L	
Hg2700-1	RN	SAM	1611326-01	1	12/8/16 3:21	18826-1.RAW	3:21:01	354.12	2		354.1	0.594	0.594	ng/L	
Hg2700-1	RN	SAM	1611326-02	1	12/8/16 3:31	18827-1.RAW	3:31:32	246.50	2		246.5	0.410	0.410	ng/L	
Hg2700-1	RN	SAM	1611326-03	1	12/8/16 3:42	18828-1.RAW	3:42:03	332.54	2		332.5	0.557	0.557	ng/L	
Hg2700-1	RN	SAM	1611326-04	1	12/8/16 3:52	18829-1.RAW	3:52:34	504.82	2		504.8	0.853	0.853	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV3	1	12/8/16 4:03	18830-1.RAW	4:03:04	221.58			221.6	0.380	0.380	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB3	1	12/8/16 4:13	18831-1.RAW	4:13:35	4.35			4.4	0.007	0.007	ng/L	
Hg2700-1	RN	SAM	1611326-05	1	12/8/16 4:24	18832-1.RAW	4:24:06	503.29	2		503.3	0.850	0.850	ng/L	
Hg2700-1	RN	SAM	1611326-06	1	12/8/16 4:34	18833-1.RAW	4:34:37	486.57	2		486.6	0.822	0.822	ng/L	
Hg2700-1	RN	SAM	1611326-07	1	12/8/16 4:45	18834-1.RAW	4:45:07	538.98	2		539.0	0.912	0.912	ng/L	

Instrument	Analyst	Sample		Dilution	Analyzed	FileID	Run End	Uncorrected Response	Batch ID	No PB Correction?	RESP	InitialResult	FinalResult	InitialUnits	Comments
		Type	LabNumber												
Hg2700-1	RN	SAM	1611326-08	1	12/8/16 4:55	18835-1.RAW	4:55:38	367.78	2		367.8	0.618	0.618	ng/L	
Hg2700-1	RN	SAM	1611391-01	1	12/8/16 5:06	18836-1.RAW	5:06:09	373.41	2		373.4	0.628	0.628	ng/L	
Hg2700-1	RN	SAM	1611391-02	1	12/8/16 5:16	18837-1.RAW	5:16:39	409.08	2		409.1	0.689	0.689	ng/L	
Hg2700-1	RN	SAM	1611391-03	1	12/8/16 5:27	18838-1.RAW	5:27:10	860.58	2		860.6	1.464	1.464	ng/L	
Hg2700-1	RN	SAM	1611391-04	1	12/8/16 5:37	18839-1.RAW	5:37:41	504.07	2		504.1	0.852	0.852	ng/L	
Hg2700-1	RN	SAM	1611392-01	1	12/8/16 5:48	18840-1.RAW	5:48:11	76.11	2		76.1	0.117	0.117	ng/L	
Hg2700-1	RN	SAM	1611392-02	1	12/8/16 5:58	18841-1.RAW	5:58:42	63.24	2		63.2	0.095	0.095	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV4	1	12/8/16 6:09	18842-1.RAW	6:09:13	228.96			229.0	0.393	0.393	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB4	1	12/8/16 6:19	18843-1.RAW	6:19:43	4.26			4.3	0.007	0.007	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV5	1	12/8/16 6:30	18844-1.RAW	6:30:14	161.57			161.6	0.277	0.277	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV6	1	12/8/16 6:40	18845-1.RAW	6:40:45	154.81			154.8	0.266	0.266	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB5	1	12/8/16 6:51	18846-1.RAW	6:51:16	3.68			3.7	0.006	0.006	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV7	1	12/8/16 7:01	18847-1.RAW	7:01:46	228.13			228.1	0.392	0.392	ng/L	
Hg2700-1	RN	CAL	SEQ-CCV8	1	12/8/16 7:12	18848-1.RAW	7:12:17	243.80			243.8	0.419	0.419	ng/L	
Hg2700-1	RN	CAL	SEQ-CCB6	1	12/8/16 7:22	18849-1.RAW	7:22:48	3.98			4.0	0.007	0.007	ng/L	

MethylMercury Operat RN BlankSub: Calib Eqn: Run Date: 12/7/2016 Blank SD:  
 EPA1630 Workst MMHg2 CalibFactor: Status: Calblank error: Zero Pe. Run Time: 0:00:00 Blank RSD%:  
 Method 2010-01-R: R1: CalibAnalyte: CF RSD%:  
 Descr: MMHg27001-161207-2

SampleID	Locator	Rinse	Dilute	Blank	ConcHo0(µ)	ConcMeHg	ConcHo2(µ)	ConcPrHg(µ)	Rec%	QA	RawData	RunEnd	PeakHo0 (Raw)	PeakMeHg (R)	PeakHo2 (Raw)	PeakPrHg (Raw)	Control (ctf)	Flags	RunCount	
Clean																				
ws	A1																			
SEQ-IBL1	A2		1																	
SEQ-CAL1	A3		1																	
SEQ-CAL2	A4		1																	
SEQ-CAL3	A5		1																	
SEQ-CAL4	A6		1																	
SEQ-CAL5	A7		1																	
SEQ-ICV1	A8		1																	
SEQ-ICB1	A9		1																	
F612292-BLK4	A10		1																	
F612292-BLK5	A11		1																	
F612292-BLK6	A12		1																	
1611323-03RE1	A13		10																	
1611323-04RE1	A14		10																	
1611323-05RE1	A15		1																	
1611323-06RE1	A16		10																	
1611323-07RE1	A17		1																	
1611323-08RE1	A18		10																	
SEQ-CCV1	A19		1																	
SEQ-CCB1	A20		1																	
F612322-BLK1	A21		1																	
F612322-BLK2	B1		1																	
F612322-BLK3	B2		1																	
F612322-B51	B3		10																	
F612322-BSD1	B4		10																	
F612322-DUP1	B5		1																	
F612322-MS1	B6		10																	
F612322-MSD1	B7		10																	
F612322-MS2	B8		10																	
F612322-MSD2	B9		10																	
SEQ-CCV2	B10		1																	
SEQ-CCB2	B11		1																	
1611325-01	B12		1																	
1611325-02	B13		1																	
1611325-03	B14		1																	
1611325-04	B15		1																	
1611325-05	B16		125																	
1611325-06	B17		1																	
1611326-01	B18		1																	
1611326-02	B19		1																	
1611326-03	B20		1																	
1611326-04	B21		1																	
SEQ-CCV3	C1		1																	
SEQ-CCB3	C2		1																	
1611326-05	C3		1																	
1611326-06	C4		1																	
1611326-07	C5		1																	
1611326-08	C6		1																	
1611391-01	C7		1																	
1611391-02	C8		1																	
1611391-03	C9		1																	
1611391-04	C10		1																	
1611392-01	C11		1																	
1611392-02	C12		1																	
SEQ-CCV4	C13		1																	
SEQ-CCB4	C14		1																	
SEQ-CCV5	C15		1																	
SEQ-CCV6	C16		1																	
SEQ-CCB5	C17		1																	
SEQ-CCV7	C18		1																	
SEQ-CCV8	C19		1																	
SEQ-CCB6	C20		1																	

Sample/ID	Locator	Run#	Dilute	Blank	ConcHq(p)	ConcMeHg	ConcHg2(p)	ConcPb(p)	Rec%	QA	RawData	RunEnd	PeakHq (R)	PeakMeHg (R)	PeakHg2 (R)	Raw PeakPb (R)	Control (etf)	Flags	RunCount
Clean																			
vs	A1																		
SEQ-HBL1	A2																		
SEQ-CAL1	A3																		
SEQ-CAL2	A4																		
SEQ-CAL3	A5																		
SEQ-CAL4	A6																		
SEQ-CAL5	A7																		
SEQ-ICV1	A8																		
SEQ-ICB1	A9																		
F612292-BLK4	A10																		
F612292-BLK5	A11																		
F612292-BLK6	A12																		
1611323-03RE1	A13																		
1611323-04RE1	A14																		
1611323-05RE1	A15																		
1611323-06RE1	A16																		
1611323-07RE1	A17																		
1611323-08RE1	A18																		
SEQ-CCV1	A19																		
SEQ-CCB1	A20																		
F612322-BLK1	A21																		
F612322-BLK2	B1																		
F612322-BLK3	B2																		
F612322-B51	B3																		
F612322-B5D1	B4																		
F612322-DUP1	B5																		
F612322-MS1	B6																		
F612322-MSD1	B7																		
F612322-MS2	B8																		
F612322-MSD2	B9																		
SEQ-CCV2	B10																		
SEQ-CCB2	B11																		
1611325-01	B12																		
1611325-02	B13																		
1611325-03	B14																		
1611325-04	B15																		
1611325-05	B16																		
1611325-06	B17																		
1611326-01	B18																		
1611326-02	B19																		
1611326-03	B20																		
1611326-04	B21																		
SEQ-CCV3	C1																		
SEQ-CCB3	C2																		
1611326-05	C3																		
1611326-06	C4																		
1611326-07	C5																		
1611326-08	C6																		
1611391-01	C7																		
1611391-02	C8																		
1611391-03	C9																		
1611391-04	C10																		
1611392-01	C11																		
1611392-02	C12																		
SEQ-CCV4	C13																		
SEQ-CCB4	C14																		
SEQ-CCV5	C15																		
SEQ-CCV6	C16																		
SEQ-CCB5	C17																		
SEQ-CCV7	C18																		
SEQ-CCV8	C19																		
SEQ-CCB6	C20																		

## ANALYSIS SEQUENCE

6L08027

Instrument: Hg2700-1

Calibration ID: UNASSIGNED

Analyzed: 12/7/2016

Lab Number	Analysis	Order	STD ID	ISTD ID	Comments
6L08027-IBL1	QC	1			
6L08027-CAL1	QC	2	1606090		
6L08027-CAL2	QC	3	1606091		
6L08027-CAL3	QC	4	1606092		
6L08027-CAL4	QC	5	1606093		
6L08027-CAL5	QC	6	1606094		
6L08027-ICV1	QC	7	1607014		
6L08027-ICB1	QC	8			
F612292-BLK4	QC	9			
F612292-BLK5	QC	10			
F612292-BLK6	QC	11			
1611323-03RE1	MHg-CVAFS-S-MeClExt	12			Added 12/7/2016 by RN
1611323-04RE1	MHg-CVAFS-S-MeClExt	13			Added 12/7/2016 by RN
1611323-05RE1	MHg-CVAFS-S-MeClExt	14			Added 12/7/2016 by RN
1611323-06RE1	MHg-CVAFS-S-MeClExt	15			Added 12/7/2016 by RN
1611323-07RE1	MHg-CVAFS-S-MeClExt	16			Added 12/7/2016 by RN
1611323-08RE1	MHg-CVAFS-S-MeClExt	17			Added 12/7/2016 by RN
6L08027-CCV1	QC	18	1607014		
6L08027-CCB1	QC	19			
F612322-BLK1	QC	20			
F612322-BLK2	QC	21			
F612322-BLK3	QC	22			
F612322-BS1	QC	23			
F612322-BSD1	QC	24			
F612322-DUP1	QC	25			
F612322-MS1	QC	26			
F612322-MSD1	QC	27			
F612322-MS2	QC	28			
F612322-MSD2	QC	29			
6L08027-CCV2	QC	30	1607014		
6L08027-CCB2	QC	31			
1611325-01	MHg-CVAFS-S-MeClExt	32			Scan all data for Level IV
1611325-02	MHg-CVAFS-S-MeClExt	33			Scan all data for Level IV
1611325-03	MHg-CVAFS-S-MeClExt	34			Scan all data for Level IV
1611325-04	MHg-CVAFS-S-MeClExt	35			Scan all data for Level IV

Due Date: 12/12/2016

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# Failing Data Report - 6L08027

Sample ID	Analysis	Result	MRL	Dup Result	Source Result	True Value	Units	% Rec.	Rec. LCL	Rec. UCL	RPD	RPD Limit	Over Cal	Failure	Qualifier
F612322-BS1	MHg-CVAFS-S-MeClExt	2.851	0.503			5.0050	ng/g	57.0	70.00	130.00			PASS-OVER	FAIL-BS	QM-12

Don Moran  
Analyst Reviewed By

12/8/16  
Date

[Signature]  
Peer Reviewed By

12/9/16  
Date

PREPARATION BENCH SHEET

RA 27001 12/7/16

F612292

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg

Prepared: 12/7/2016

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612292-BLK1	Blank	0.5	250					
F612292-BLK2	Blank	0.5	250					
F612292-BLK3	Blank	0.5	250					
<del>F612292-BLK4</del>	Blank	0.5	250					1x
<del>F612292-BLK5</del>	Blank	0.5	250					1x
<del>F612292-BLK6</del>	Blank	0.5	250					1x
F612292-BS1	Blank Spike	0.5	250	1605978	25			
F612292-BSD1	Blank Spike Dup	0.5	250	1605978	25			
F612292-DUP1	Duplicate [1611249-07]	0.5618	250					
F612292-MS1	Matrix Spike [1611249-07]	0.564	250	1605978	25			
F612292-MS2	Matrix Spike [1611323-01]	0.5451	250	1605978	25			
F612292-MSD1	Matrix Spike Dup [1611249-07]	0.5688	250	1605978	25			
F612292-MSD2	Matrix Spike Dup [1611323-01]	0.5488	250	1605978	25			

Standard ID(s): 1605978  
 Description: MHg New Primary 100 ng/mL spike

Expiration: 15-Oct-17 00:00

Reagent ID(s): 1602382, 1603399, 1605961, 1606841, 1607015, 1607016  
 Description: Dichloromethane, Boiling Chips for AFS prep, Acetate Buffer, Ethylating Agent (For Methyl Mercury Analysis), Acid Bromide, CuSO4

Expiration: 05-May-19 00:00, 01-Jun-17 00:00, 11-Apr-17 00:00, 22-May-17 00:00, 01-Jan-17 00:00, 30-May-17 00:00



PREPARATION BENCH SHEET

F612292

Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg

Prepared: 12/7/2016

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611242-12	NB03SED-CHM333 8678451	0.5824	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-13	NB03SED-CHM334 8678453	0.5328	250	-	-	-	Preservation Blank Created Scan all dat	
1611242-14	NB03SED-CHM390 8678455	0.5578	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-01	NB03SED-CHM332 8680694	0.5424	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-02	NB03SED-CHM381 8680696	0.5554	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-03	NB03SED-CHM328 8680698	0.5611	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-04	NB03SED-CHM327 8680700	0.5525	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-05	NB03SEDDUP-11 8680702	0.576	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-06	NB03SED-CHM380 8680704	0.5406	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-07	NB03SED-CHM326 8680708	0.5781	250	QC	-	-	MS/MSD Scan all data for Level IV	
1611249-08	NB03SED-CHM326 DUP 8680711	0.5631	250	-	-	-	Preservation Blank Created Scan all dat	
1611249-09	NB03SED-CHM341 8680713	0.5622	250	-	-	-	Preservation Blank Created Scan all dat	
1611323-01	W-61-HIGH_110816_SED_03	0.5412	250	-	-	-		
1611323-02	W-61-INT_110816_SED_03	0.5872	250	-	-	-		
1611323-03	W-61-LOW_110816_SED_03	0.5548	250	-	-	-		
1611323-03RE1	W-61-LOW_110816_SED_03	0.5548	250	-	-	-	Added 12/7/2016 by RN	Added 12/7/2016 by RN 10 <sub>2</sub>
1611323-04	W-61-MID_110816_SED_03	0.5893	250	-	-	-		
1611323-04RE1	W-61-MID_110816_SED_03	0.5893	250	-	-	-	Added 12/7/2016 by RN	Added 12/7/2016 by RN 10 <sub>2</sub>
1611323-05	W-63-HIGH_110816_SED_03	0.5396	250	-	-	-		

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Date: 12/8/2016

**PREPARATION BENCH SHEET**

F612292

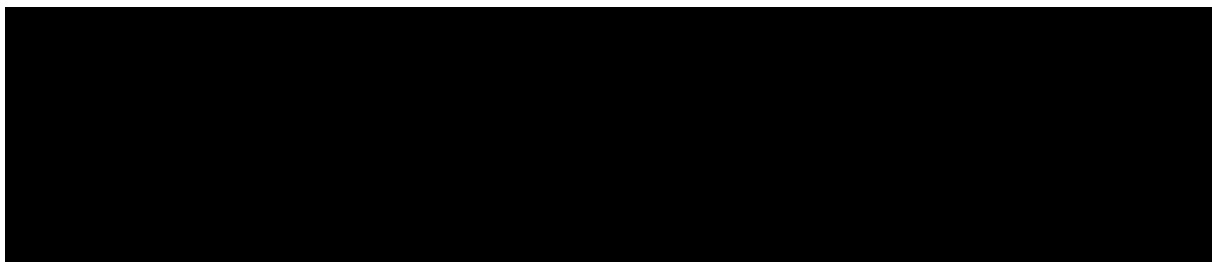
**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/7/2016**

1611323-05RE1	W-63-HIGH_110816_SED_03	0.5396	250	-	-	-	Added 12/7/2016 by RN	Added 12/7/2016 by RN 1x
1611323-06	W-63-INT_110816_SED_03	0.5442	250	-	-	-		
1611323-06RE1	W-63-INT_110816_SED_03	0.5442	250	-	-	-	Added 12/7/2016 by RN	Added 12/7/2016 by RN 10x
1611323-07	W-63-LOW_110816_SED_03	0.5826	250	-	-	-		
1611323-07RE1	W-63-LOW_110816_SED_03	0.5826	250	-	-	-	Added 12/7/2016 by RN	Added 12/7/2016 by RN 1x
1611323-08	W-63-MID_110816_SED_03	0.5904	250	-	-	-		
1611323-08RE1	W-63-MID_110816_SED_03	0.5904	250	-	-	-	Added 12/7/2016 by RN	Added 12/7/2016 by RN 10x



**PREPARATION BENCH SHEET**

2700-1  
12/7/16

F612322

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/7/2016**

Lab Number	Sample ID and Source Sample	Initial (g)	Final (mL)	Spike1 ID	µl Spike1	Spike2 ID	µl Spike2	Extraction Comments
F612322-BLK1	Blank	0.5	250					
F612322-BLK2	Blank	0.5	250					
F612322-BLK3	Blank	0.5	250					
F612322-BS1	Blank Spike	0.5	250	1605978	25			
F612322-BSD1	Blank Spike dup	0.5	250	1605978	25			
F612322-DUP1	Duplicate [1611326-01]	0.5583	250					
F612322-MS1	Matrix Spike [1611326-01]	0.5264	250	1605978	25			
F612322-MS2	Matrix Spike [1611392-01]	0.5475	250	1605978	25			
F612322-MSD1	Matrix Spike Dup [1611326-01]	0.5602	250	1605978	25			
F612322-MSD2	Matrix Spike Dup [1611392-01]	0.5653	250	1605978	25			

<u>Standard ID(s):</u> 1605978	<u>Description:</u> MHg New Primary 100 ng/mL spike	<u>Expiration:</u> 15-Oct-17 00:00	<u>Reagent ID(s):</u> 1602382 1603399 1607015 1607016	<u>Description:</u> Dichloromethane Boiling Chips for AFS prep Acid Bromide CuSO4	<u>Expiration:</u> 05-May-19 00:00 01-Jun-17 00:00 01-Jan-17 00:00 30-May-17 00:00
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1605961  
1606841

**PREPARATION BENCH SHEET**

F612322

**Eurofins Frontier Global Sciences, Inc.**

**Matrix: Soil/Sediment**

**Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg**

**Prepared: 12/7/2016**

Lab Number	Sample ID	Initial (g)	Final (mL)	QC Sample	Sample Specs.	Raw Data	Sample Comments	Analysis Comments
1611325-01	NB03SED-CHM358	0.5563	250	-	-	-	Preservation Blank Created Scan all dat	
1611325-02	NB03SED-CHM358C	0.5661	250	-	-	-	Preservation Blank Created Scan all dat	
1611325-03	NB03SED-CHM358D	0.5228	250	-	-	-	Preservation Blank Created Scan all dat	
1611325-04	NB03SED-CHM357	0.5721	250	-	-	-	Preservation Blank Created Scan all dat	
1611325-05	NB03SED-CHM356	0.5325	250	-	-	-	Preservation Blank Created Scan all dat	
1611325-06	NB03SED-CHM352	0.55	250	-	-	-	Preservation Blank Created Scan all dat	
1611326-01	NB03SED-CHM347	0.5291	250	-	-	-	Scan all data for Level IV	
1611326-02	NB03SED-CHM353	0.5851	250	-	-	-	Scan all data for Level IV	
1611326-03	NB03SED-CHM348	0.5418	250	-	-	-	Scan all data for Level IV	
1611326-04	NB03SED-CHM342	0.5721	250	-	-	-	Scan all data for Level IV	
1611326-05	NB03SED-CHM346	0.5622	250	-	-	-	Scan all data for Level IV	
1611326-06	NB03SED-CHM351	0.5863	250	-	-	-	Scan all data for Level IV	
1611326-07	NB03SED-CHM355	0.5939	250	-	-	-	Scan all data for Level IV	
1611326-08	NB03SED-CHM343	0.5805	250	-	-	-	Scan all data for Level IV	
1611391-01	NB03SED-CHM368	0.5453	250	-	-	-	Preservation Blank Created Scan all dat	
1611391-02	NB03SED-CHM364	0.5632	250	-	-	-	Preservation Blank Created Scan all dat	
1611391-03	NB03SED-CHM183	0.5574	250	-	-	-	Preservation Blank Created Scan all dat	
1611391-04	NB03SED-CHM184	0.5203	250	-	-	-	Preservation Blank Created Scan all dat	
1611391-01	NB03SED-CHM182	0.5768	250	QC	-	-	MS/MSD Scan all data for Level IV	

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Date: 12/12/2016

PREPARATION BENCH SHEET

F612322

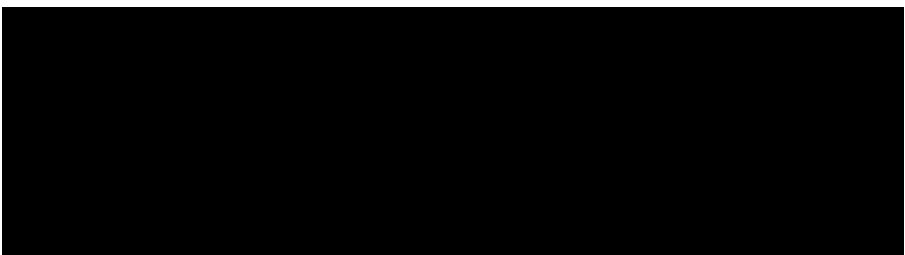
Eurofins Frontier Global Sciences, Inc.

Matrix: Soil/Sediment

Prepared using: Hg Aquatic/Solids - EFGS-045 MeCl2 Extraction for Methyl Hg

Prepared: 12/7/2016

1611392-02	NB03SED-CHM182 DUP	0.5512	250	-	-	-	Scan all data for Level IV	
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**Methyl Mercury Sediment Preparation : EFAPS-T-AFS-SOP5134**

Technician: Duyen Batch#: F612322 Date: 12-7-16

Heat Block 45°C (nitrogen purge for 30 minutes). Balance#: 19 Calibrated?  Yes  No

Date of purging:	Actual Temp (raw) °C	W/CF °C	Hot Block Unit # (10 or 11)	Date of purging:	Actual Temp (raw) °C	W/CF °C	Hot Block Unit # (10 or 11)
12/7/16 DH							
1 <sup>st</sup> time in: 12:50	48.2	48.5	10	1 <sup>st</sup> time in:			
1 <sup>st</sup> time out: 13:20	48.9	48.2	10	1 <sup>st</sup> time out:			
2 <sup>nd</sup> time in: 13:30	48.3	47.6	11	2 <sup>nd</sup> time in:			
2 <sup>nd</sup> time out: 14:00	48.8	48.1	11	2 <sup>nd</sup> time out:			
3 <sup>rd</sup> time in: 14:05	48.5	47.8	10	3 <sup>rd</sup> time in:			
3 <sup>rd</sup> time out: 14:35	49.4	48.7	10	3 <sup>rd</sup> time out:			
4 <sup>th</sup> time in: 14:45	49.2	48.5	11	4 <sup>th</sup> time in:			
4 <sup>th</sup> time out: 15:15	49.1	48.4	11	4 <sup>th</sup> time out:			

Final vol.: 50 mL (LIMS ID: N/A) Spike vol.: 25 µL (LIMS ID: 1605978)

Spike Witness: DM 12/7/16 (initial and date)

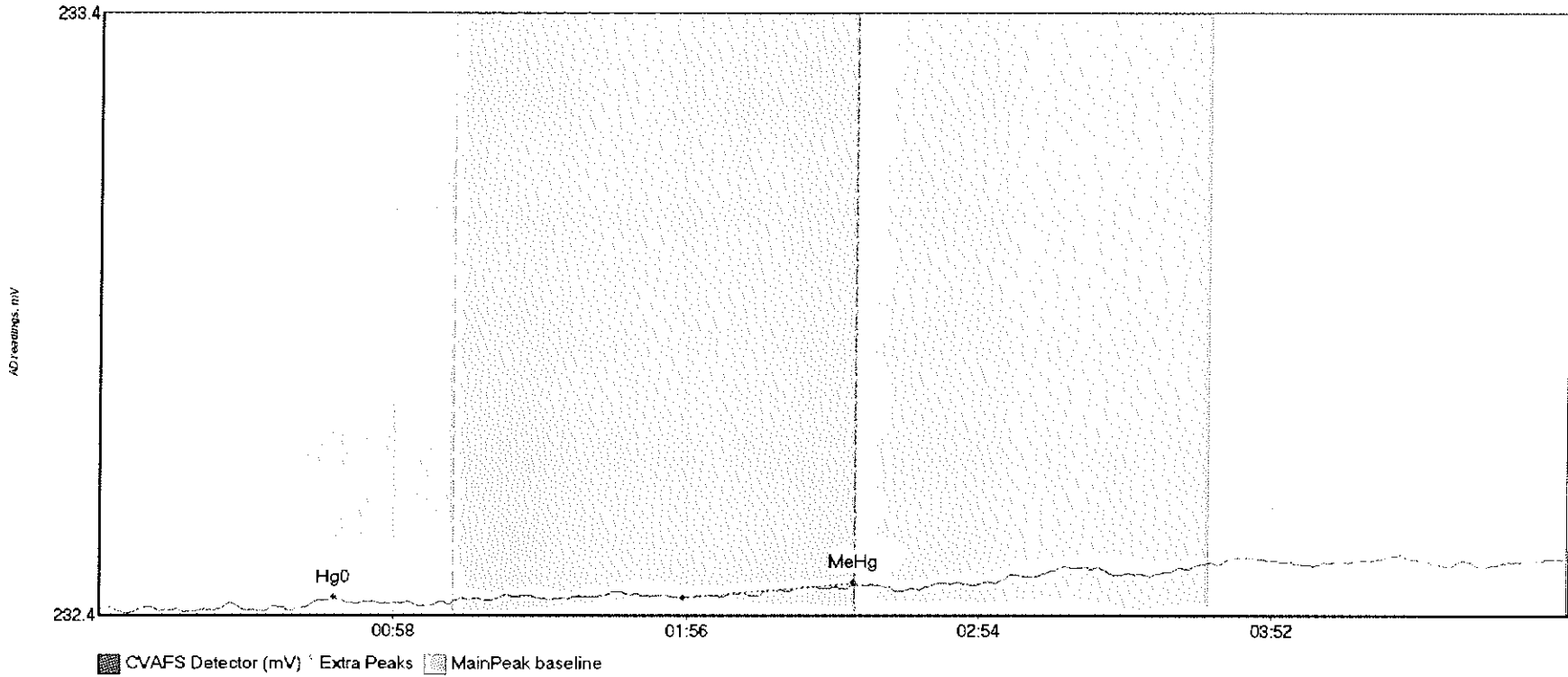
Acid Bromide LIMS ID: 1607015  
 CH<sub>2</sub>Cl<sub>2</sub> LIMS ID: 1602382  
 CuSO<sub>4</sub> LIMS ID: 1607016  
 Other Acid LIMS ID: N/A  
 Centrifuge Tube Lot #: J224177-1123

Pipette SN#: C519087 Calibration Date: 12/5/16  
 Pipette SN#: U24486 Calibration Date: 12/5/16  
 Dispenser #: 12391647 Calibrated?  Yes  No  
 Boiling Chip lot #: 1603399

Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> µg	Vial #	Sample ID Number	Sample Size <input type="checkbox"/> mL <input checked="" type="checkbox"/> µg	Comments
1	F612322 Blk1	0.5699	23	1611326-07	0.5939	Thermometer SN: 140418012
2	F612322 Blk2	0.5412	24	1611326-08	0.5805	140418012
3	F612322 Blk3	0.5083	25	1611391-01	0.5453	Dup MS1 MS01
4	F612322 BS1	0.5120	26	1611391-02	0.5632	some
5	F612322 BS01	0.4998	27	1611391-03	0.5574	1611326-01
6	F612322 Dup1	0.5583	28	1611391-04	0.5203	MS2 MS02
7	F612322 MS1	0.5264	29	1611392-01	0.5768	1611392-01
8	F612322 MS21	0.5602	30	1611392-02	0.5512	12/7/16 wch
9	F612322 MS2	0.5475	31			
10	F612322 MS02	0.5653	32			
11	1611325-01	0.5563	33			
12	1611325-02	0.5661	34			
13	1611325-03	0.5228	35			
14	1611325-04	0.5721	36			
15	1611325-05	0.5325	37			
16	1611325-06	0.5500	38			
17	1611326-01	0.5291	39			
18	1611306-02	0.5851	40			
19	1611306-03	0.5418	41			
20	1611306-04	0.5721	42			
21	1611306-05	0.5622	43			
22	1611306-06	0.5863	44			

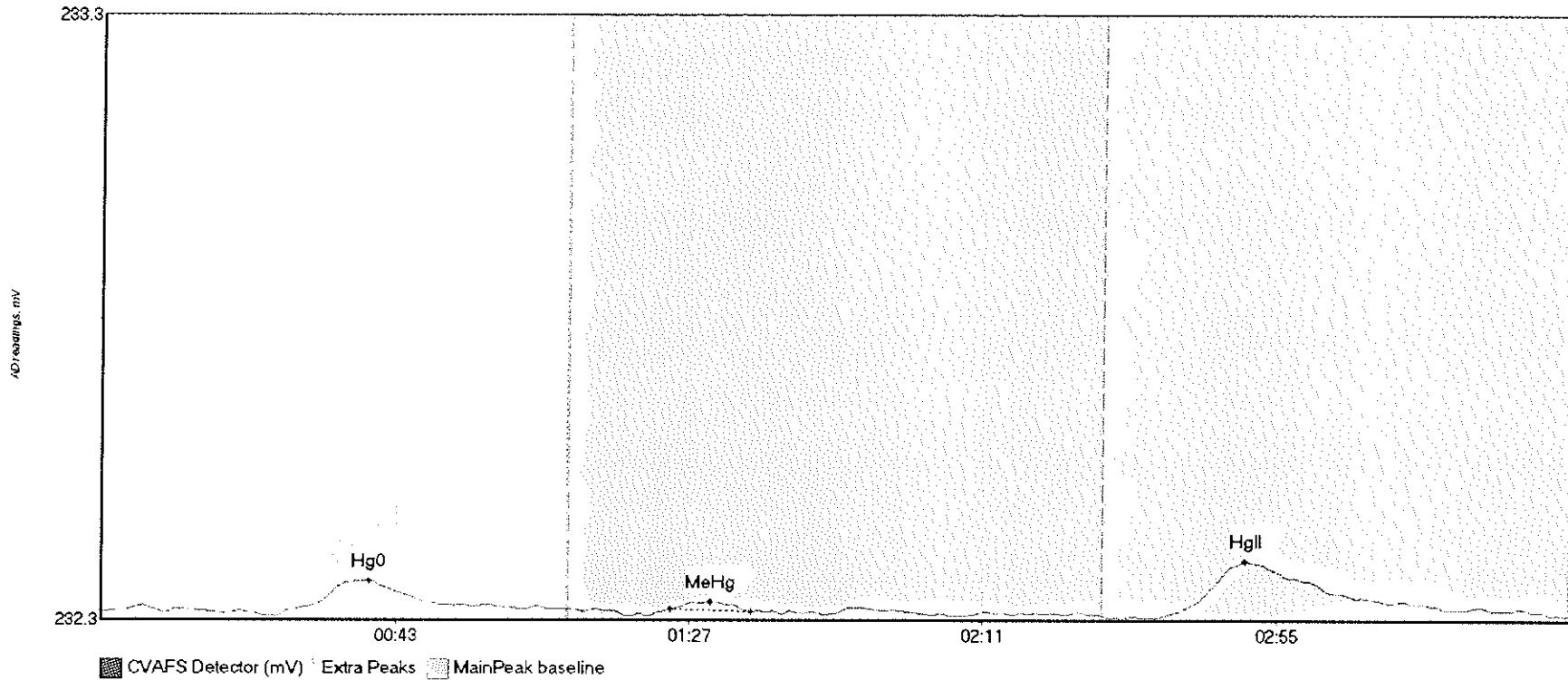
Verified AMB 12-6-16

#1: Clean



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BiShift	Comment
Clean Hg0	1.946	39.9	63.7	232.37	232.37	46.3	0.017	OK	232.3722	0.00	0.08	
Clean MeHg	0.148	115.7	150.0	232.39	232.41	149.7	0.025	CT	232.3722	0.00	0.08	

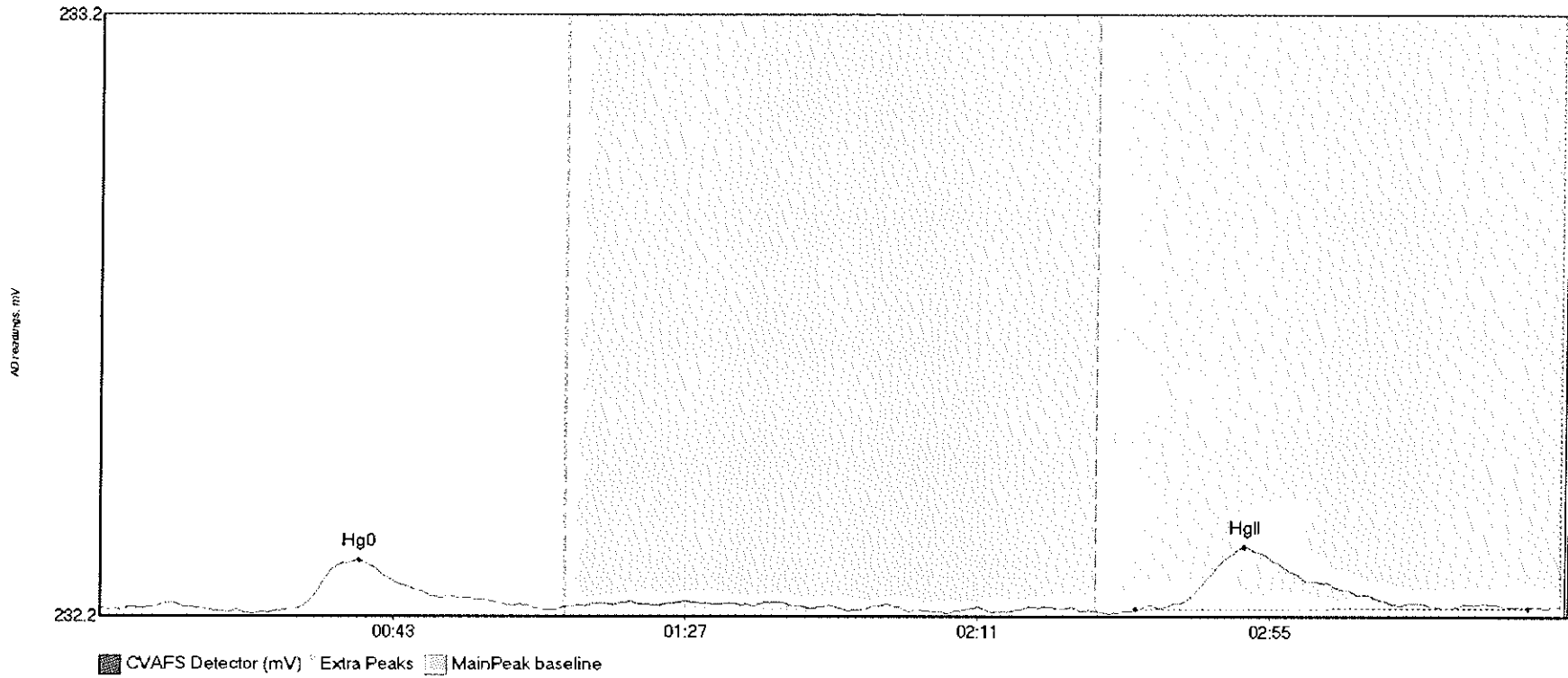
#2: ws



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BiShift	Comment
ws Hg0	8.057	26.1	62.6	232.31	232.32	40.0	0.059	OK	232.3201	0.00	-0.01	
ws MeHg	1.154	85.2	97.2	232.32	232.32	91.2	0.013	OK	232.3201	0.00	-0.01	
ws HgII	19.817	158.4	217.3	232.31	232.31	171.3	0.092	OK	232.3201	0.00	-0.01	

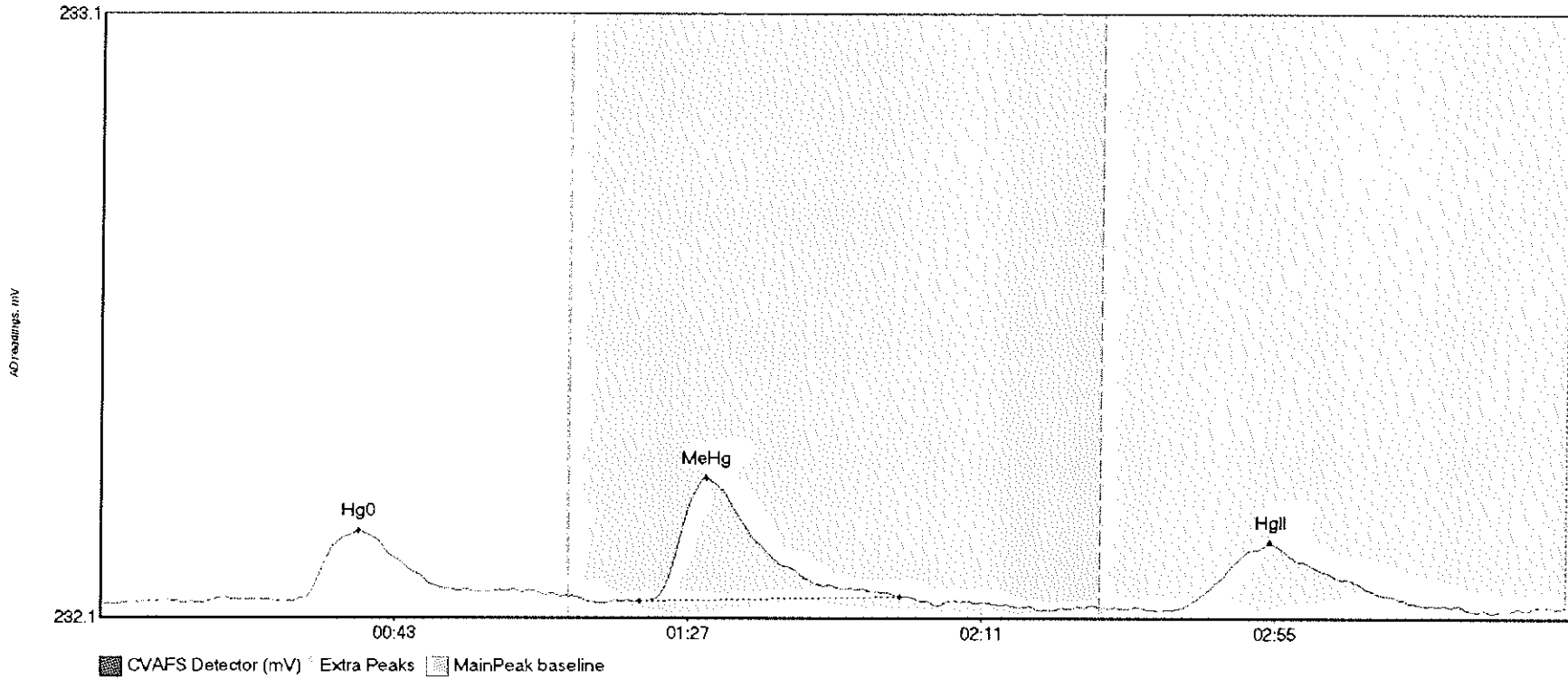


#3: SEQ-IBL1



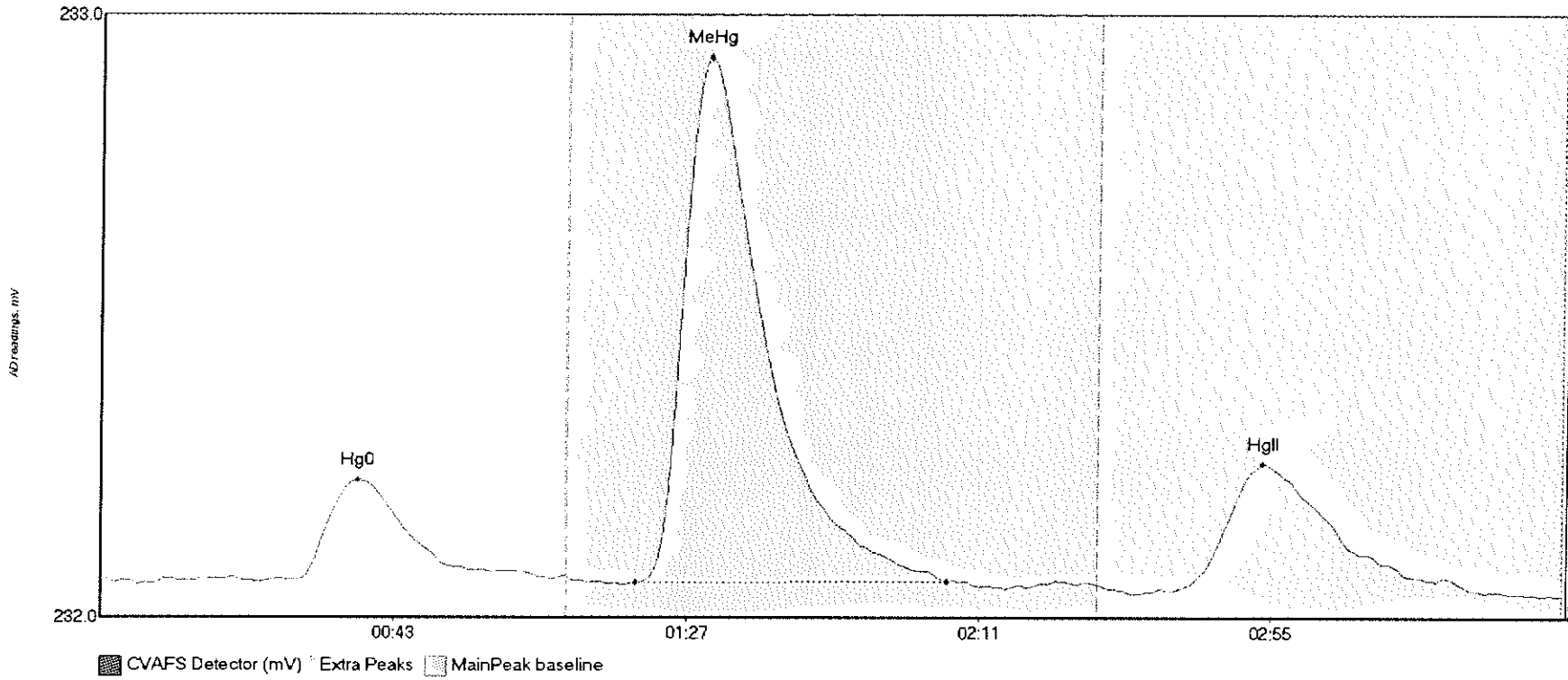
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-IBL1 Hg0	11.030	29.1	62.1	232.24	232.24	38.9	0.082	OK	232.2401	0.00	0.00	
SEQ-IBL1 HgII	18.150	155.9	215.0	232.24	232.24	172.2	0.104	OK	232.2401	0.00	0.00	

#4: SEQ-CAL1



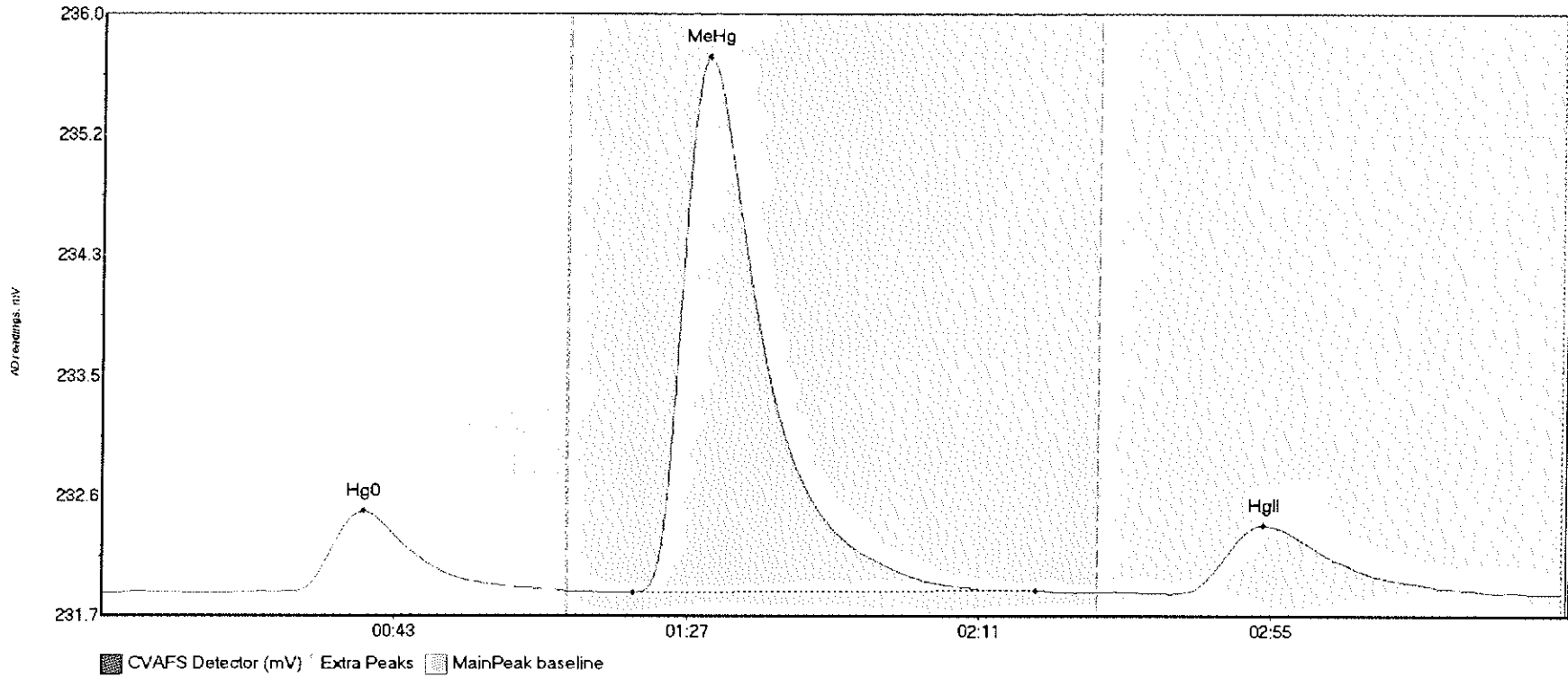
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BlShift	Comment
SEQ-CAL1 Hg0	15.643	28.8	68.9	232.15	232.16	38.7	0.115	OK	232.1452	0.00	-0.01	
SEQ-CAL1 MeHg	26.722	80.7	119.7	232.15	232.16	90.7	0.205	OK	232.1452	0.00	-0.01	
SEQ-CAL1 HgII	18.274	160.4	198.4	232.14	232.14	175.3	0.110	OK	232.1452	0.00	-0.01	

#5: SEQ-CAL2



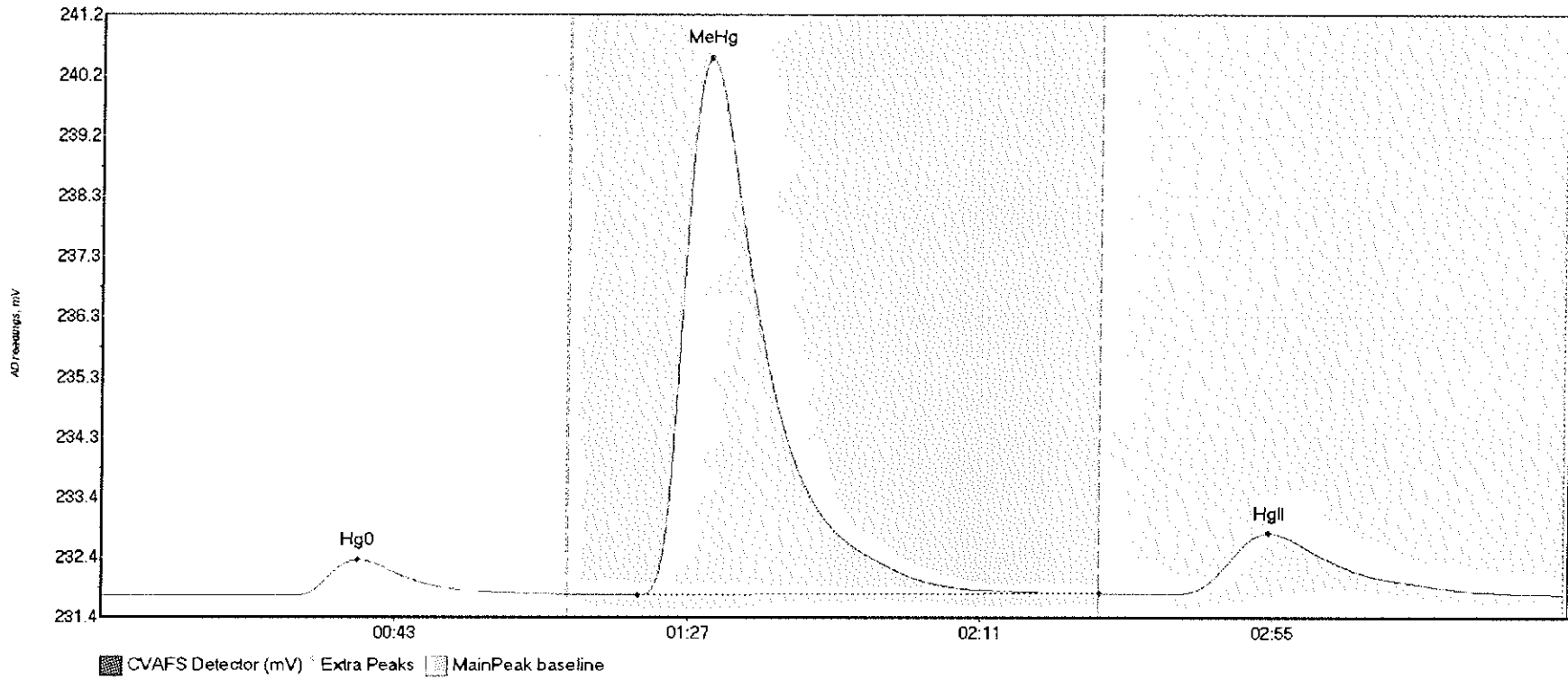
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BiShift	Comment
SEQ-CAL2 Hg0	21.830	29.5	65.7	232.04	232.05	38.6	0.165	OK	232.0453	0.00	-0.03	
SEQ-CAL2 MeHg	123.849	80.3	127.1	232.04	232.04	91.3	0.874	OK	232.0453	0.00	-0.03	
SEQ-CAL2 HgII	38.286	160.9	206.6	232.02	232.02	174.7	0.212	OK	232.0453	0.00	-0.03	

#6: SEQ-CAL3



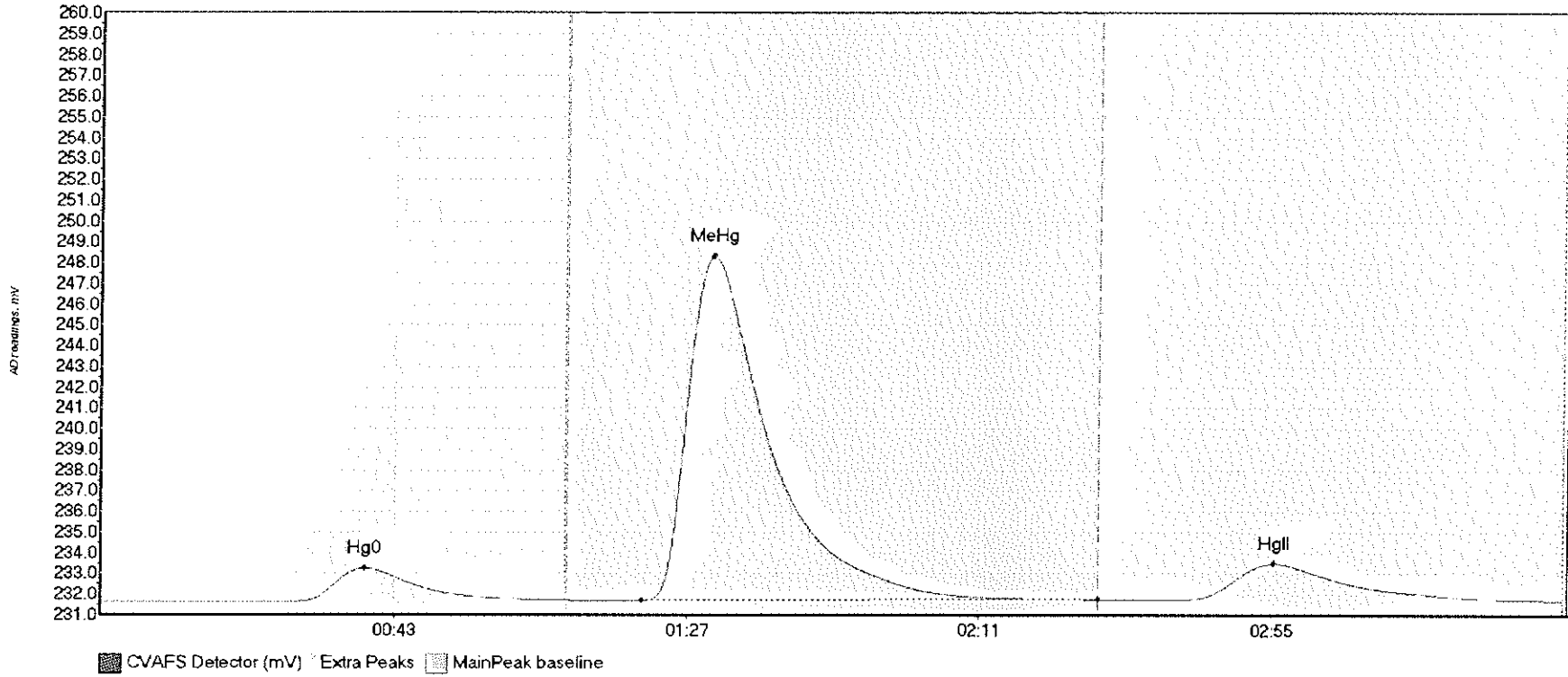
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL3 Hg0	81.729	19.4	69.9	231.90	231.91	39.4	0.583	CT	231.8962	0.00	-0.01	
SEQ-CAL3 MeHg	542.889	79.9	140.6	231.90	231.92	91.0	3.828	OK	231.8962	0.00	-0.01	
SEQ-CAL3 HgII	89.651	161.9	209.9	231.89	231.90	174.9	0.489	OK	231.8962	0.00	-0.01	

#7: SEQ-CAL4



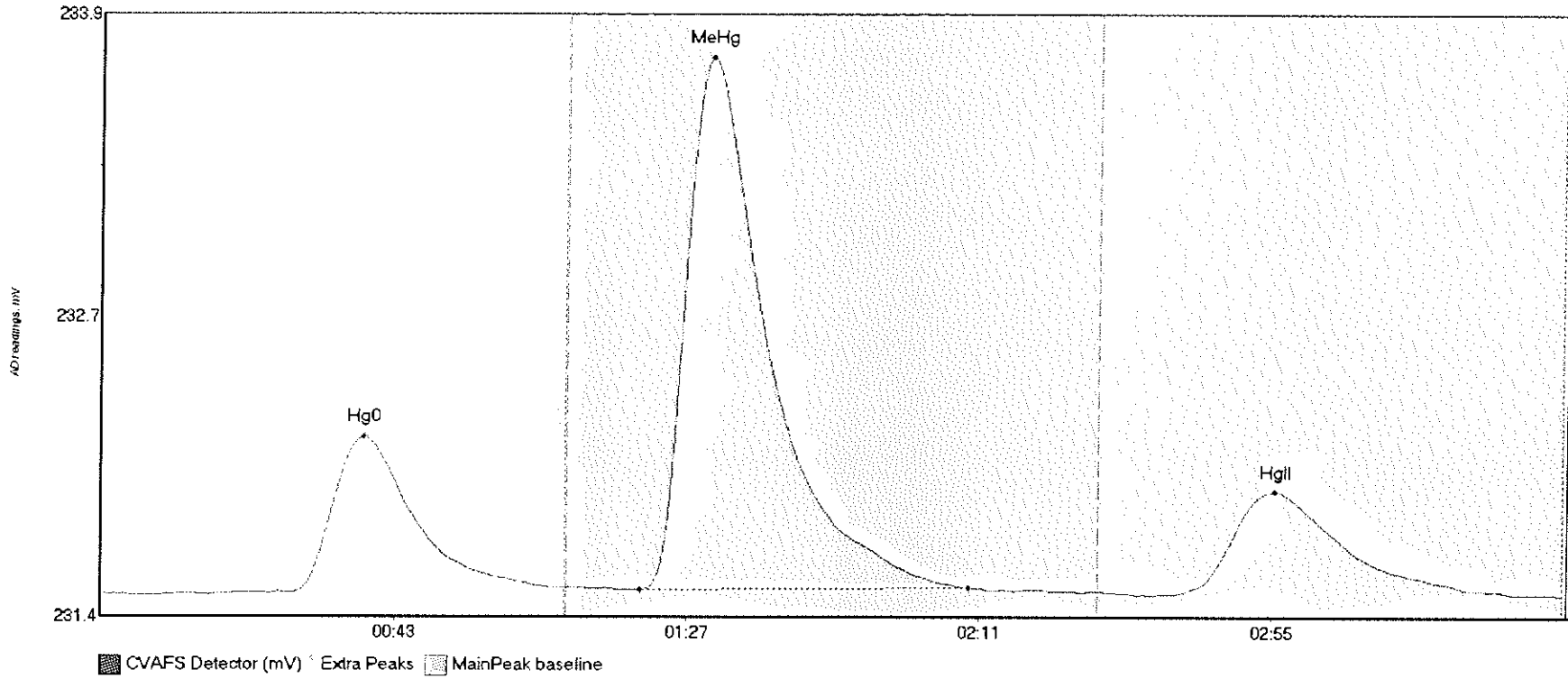
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL4 Hg0	77.834	28.9	69.9	231.76	231.78	38.5	0.578	CT	231.7626	0.00	0.02	
SEQ-CAL4 MeHg	1244.780	80.4	150.0	231.78	231.81	91.2	8.709	CT	231.7626	0.00	0.02	
SEQ-CAL4 HgII	184.921	161.2	214.2	231.79	231.80	175.4	0.990	OK	231.7626	0.00	0.02	

#8: SEQ-CAL5



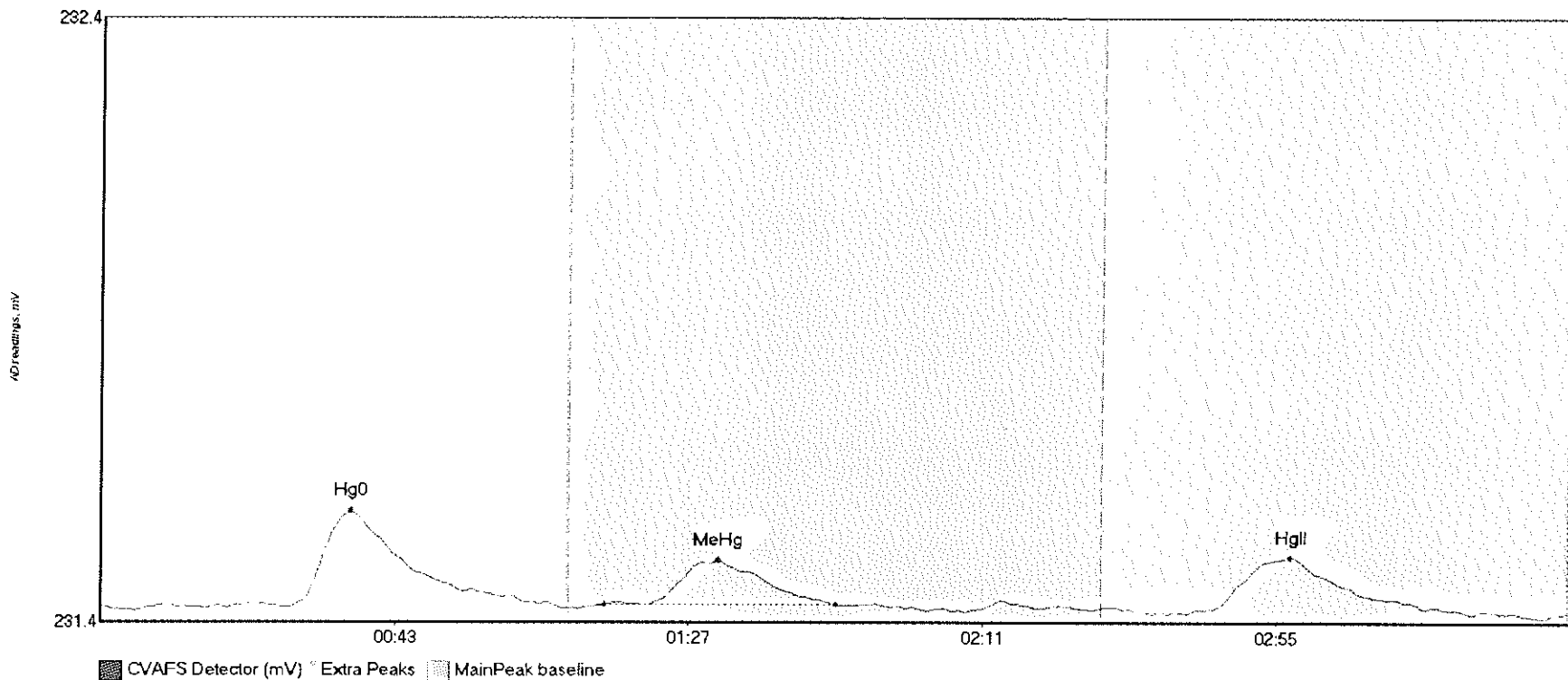
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CAL5 Hg0	213.671	29.1	69.9	231.66	231.72	39.6	1.608	CT	231.6578	0.00	0.05	
SEQ-CAL5 MeHg	2373.962	81.1	149.9	231.69	231.75	91.9	16.603	OK	231.6578	0.00	0.05	
SEQ-CAL5 HgII	328.600	160.1	212.7	231.72	231.74	176.3	1.763	OK	231.6578	0.00	0.05	

#9: SEQ-ICV1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-ICV1 Hg0	86.439	28.3	69.1	231.55	231.57	39.4	0.629	OK	231.5445	0.00	-0.01	
SEQ-ICV1 MeHg	304.412	81.0	130.4	231.56	231.57	91.6	2.149	OK	231.5445	0.00	-0.01	
SEQ-ICV1 HgII	74.698	161.4	207.5	231.54	231.56	176.4	0.414	OK	231.5445	0.00	-0.01	

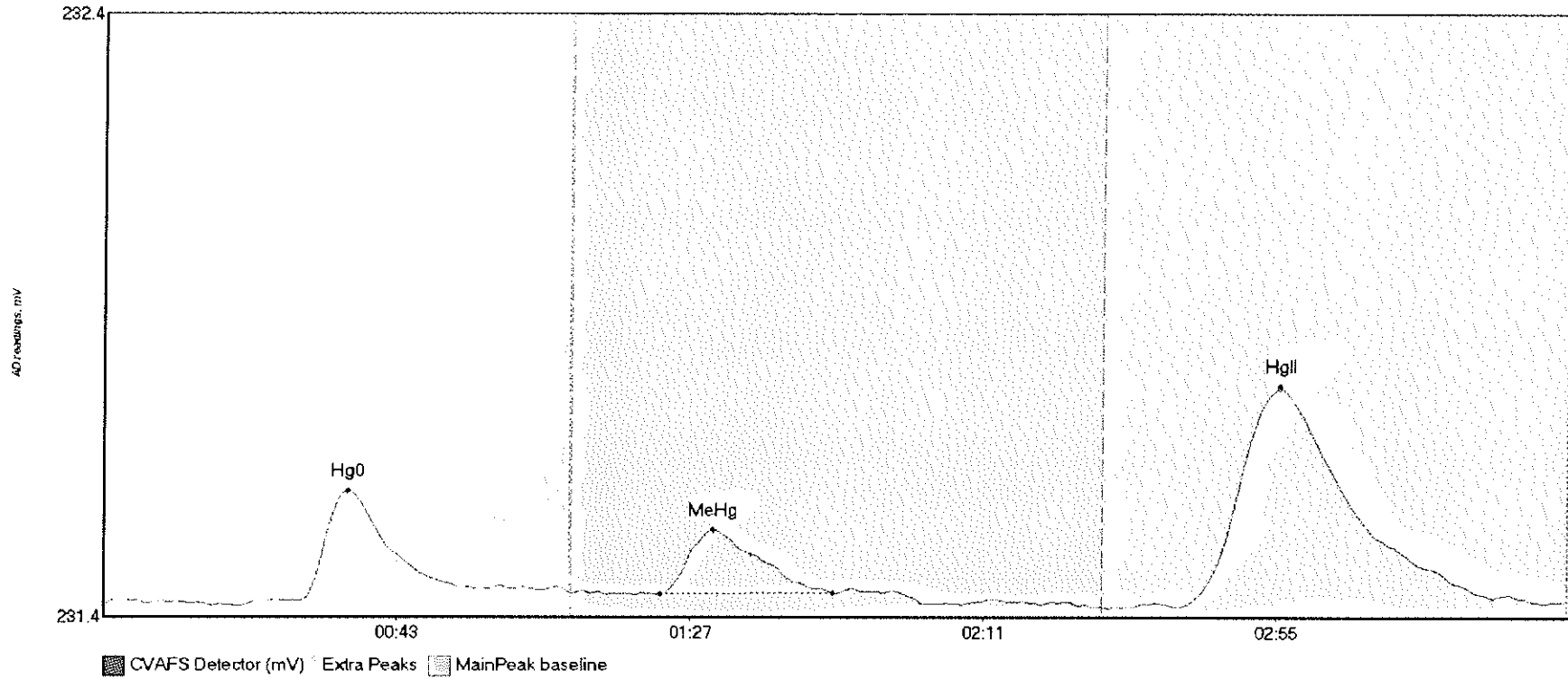
#10: SEQ-ICB1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BlShift	Comment
SEQ-ICB1 Hg0	22.740	28.4	69.0	231.46	231.46	37.4	0.157	OK	231.4653	0.00	-0.01	
SEQ-ICB1 MeHg	10.259	75.5	110.0	231.47	231.47	92.5	0.074	OK	231.4653	0.00	-0.01	
SEQ-ICB1 HgII	13.280	166.2	198.5	231.46	231.46	178.2	0.087	OK	231.4653	0.00	-0.01	

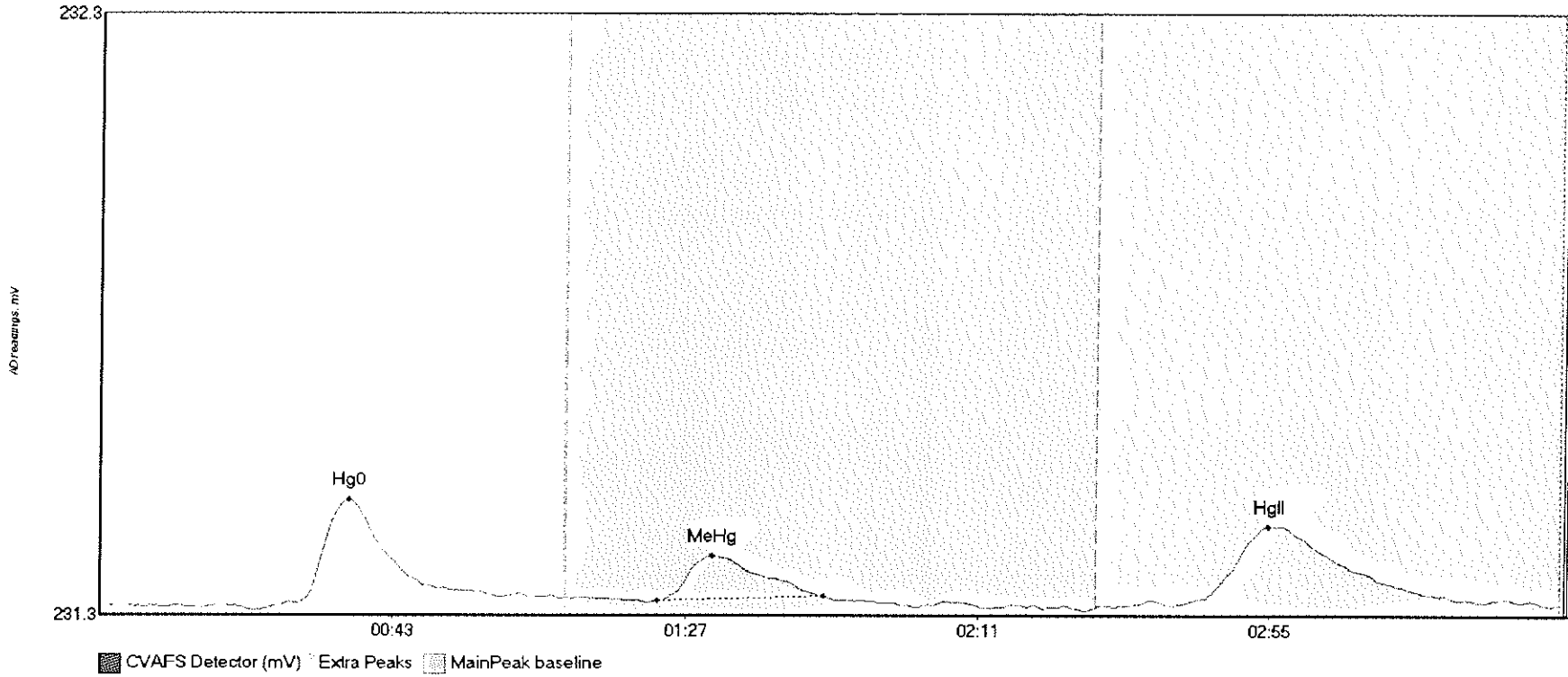


#11: F612292-BLK4



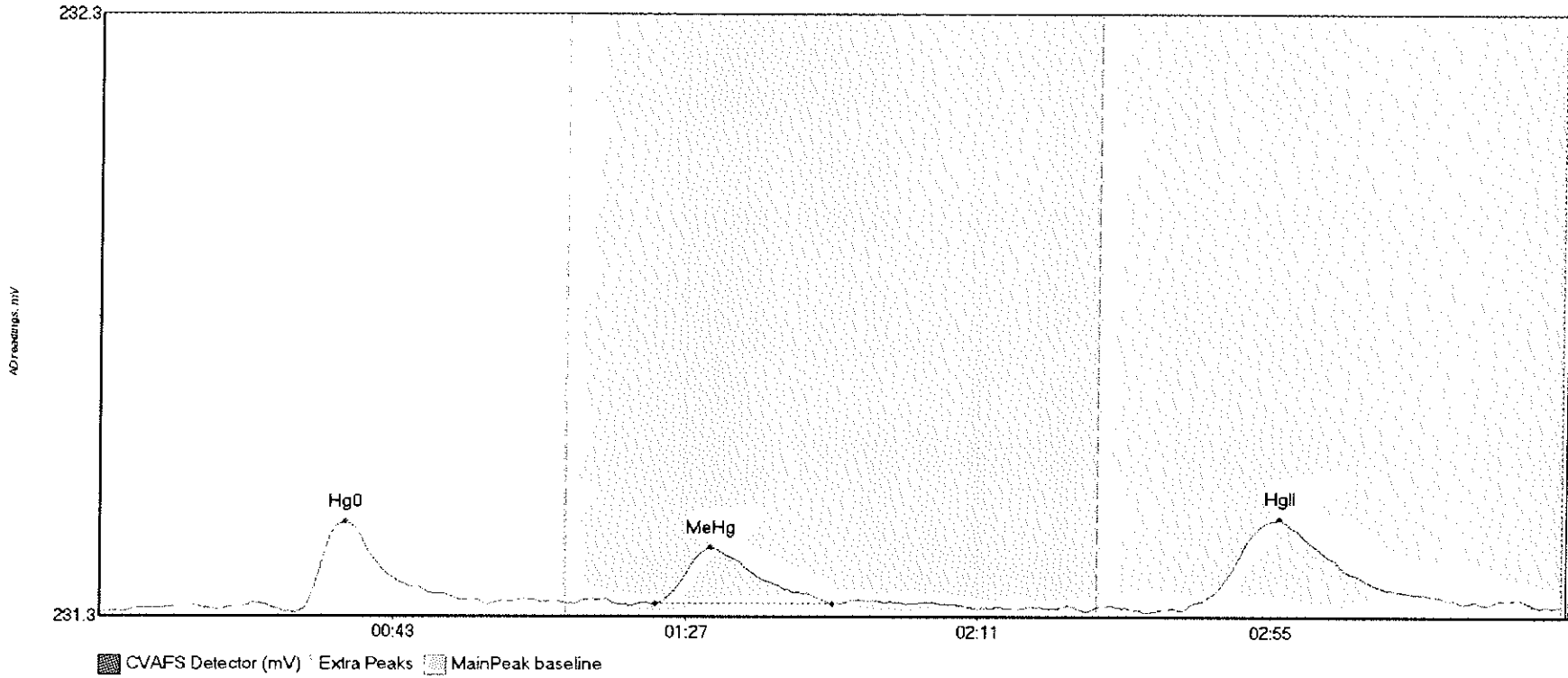
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BLK4 Hg	20.958	29.7	69.9	231.39	231.40	36.7	0.181	CT	231.3868	0.00	0.00	
F612292-BLK4 Me	12.677	83.5	109.4	231.40	231.40	91.4	0.107	OK	231.3868	0.00	0.00	
F612292-BLK4 Hg	68.603	161.2	216.5	231.38	231.39	176.5	0.364	OK	231.3868	0.00	0.00	

#12: F612292-BLK5



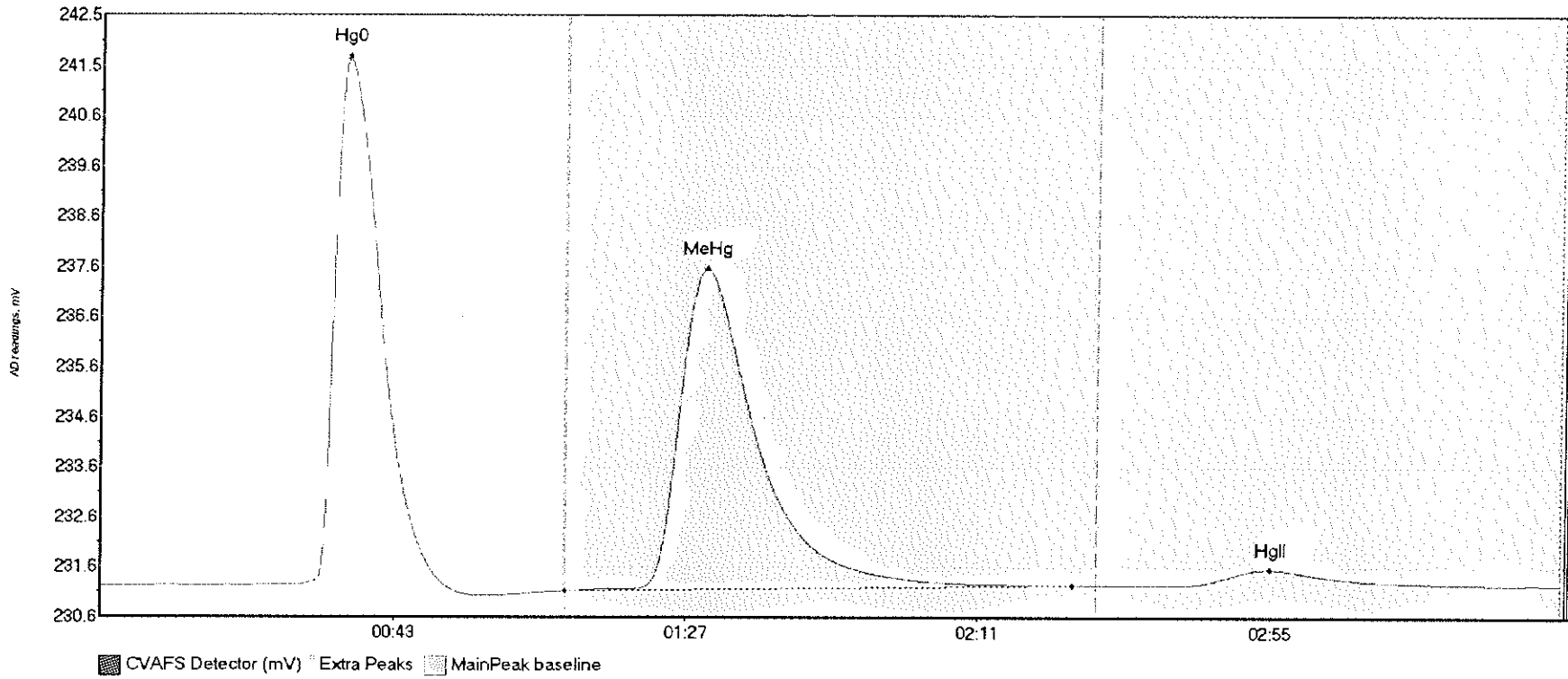
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BLK5 Hg	19.033	29.3	69.2	231.33	231.33	37.4	0.171	OK	231.3230	0.00	0.00	
F612292-BLK5 Me	8.991	83.8	108.9	231.33	231.34	92.0	0.075	OK	231.3230	0.00	0.00	
F612292-BLK5 Hg	23.369	163.1	207.9	231.32	231.33	175.9	0.130	OK	231.3230	0.00	0.00	

#13: F612292-BLK6



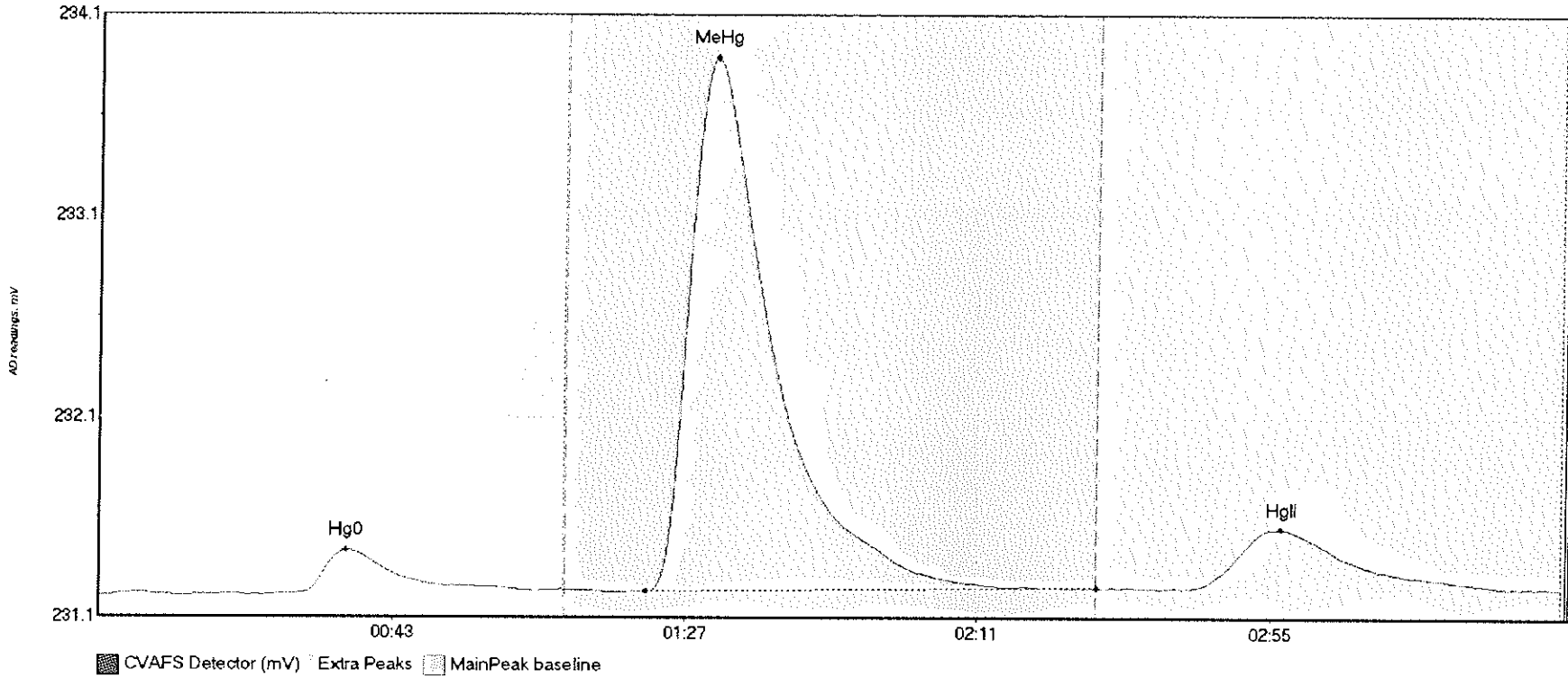
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612292-BLK6 Hg	15.880	29.2	58.3	231.28	231.30	36.8	0.151	OK	231.2864	0.00	0.01	
F612292-BLK6 Me	11.519	83.4	110.1	231.30	231.30	91.7	0.094	OK	231.2864	0.00	0.01	
F612292-BLK6 Hg	25.910	162.6	208.3	231.29	231.30	177.3	0.151	OK	231.2864	0.00	0.01	

#14: 1611323-03RE1



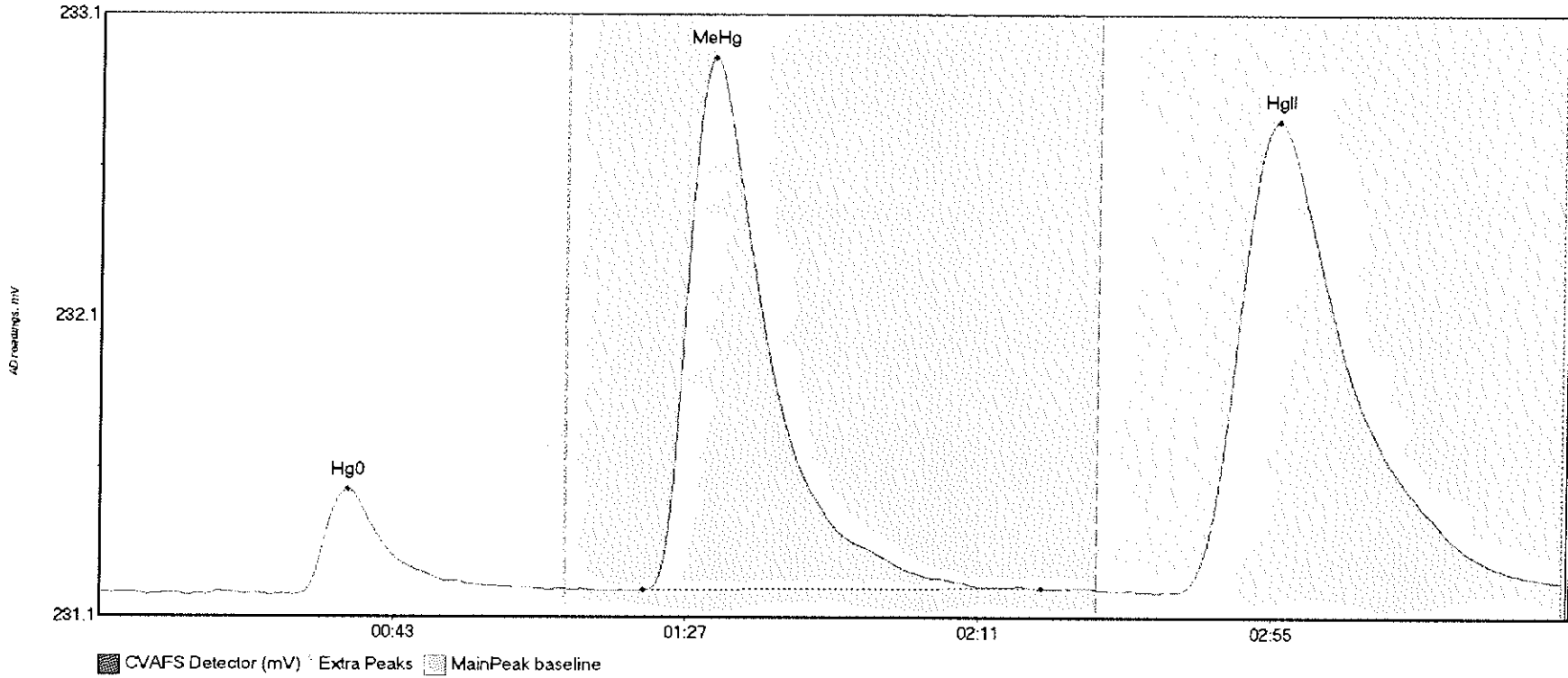
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-03RE1 H	845.838	27.9	58.2	231.25	231.04	37.0	10.439	OK	231.2494	0.00	0.01	
1611323-03RE1 M	855.837	70.0	146.3	231.14	231.26	91.0	6.395	OK	231.2494	0.00	0.01	
1611323-03RE1 H	55.651	162.4	209.9	231.25	231.26	176.1	0.320	OK	231.2494	0.00	0.01	

#15: 1611323-04RE1



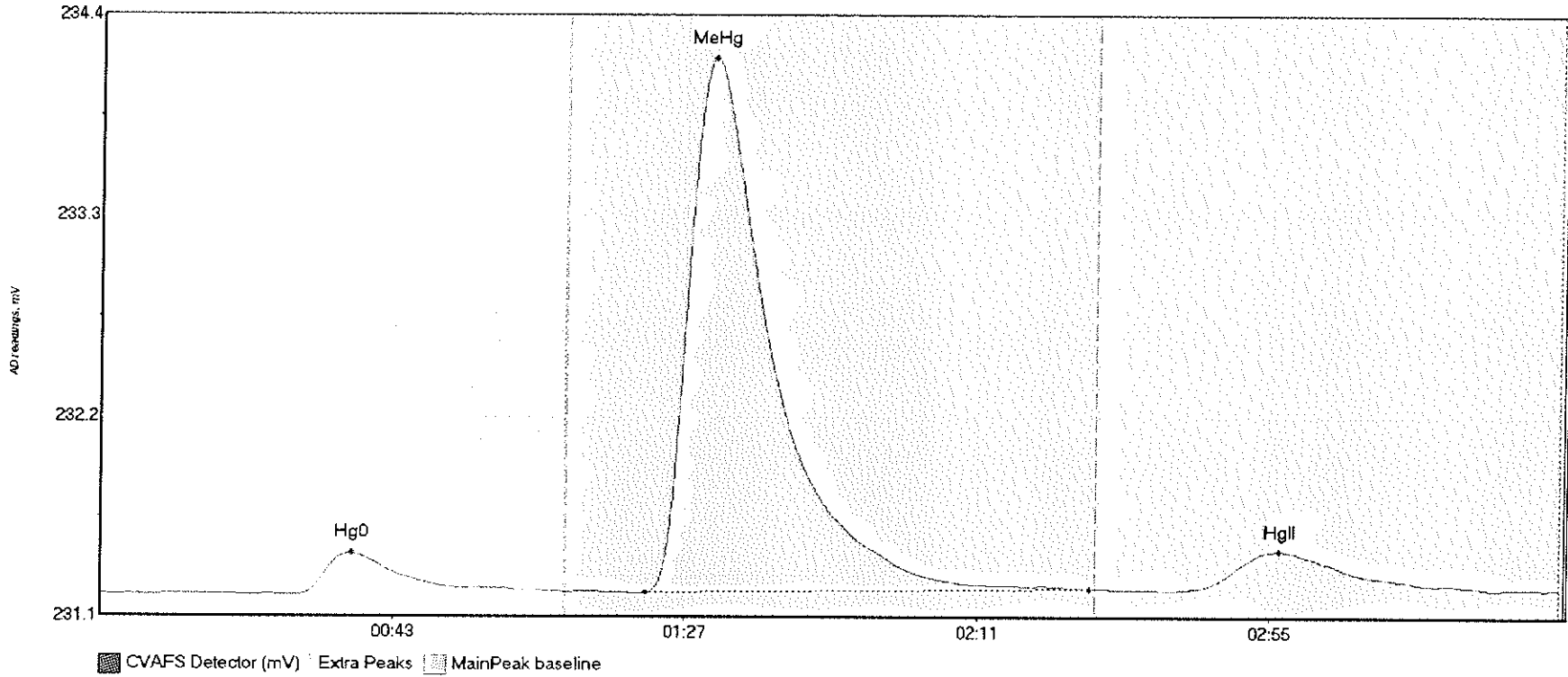
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-04RE1 H	26.428	24.5	65.5	231.22	231.24	37.0	0.222	OK	231.2188	0.00	0.04	
1611323-04RE1 M	382.055	82.2	150.0	231.24	231.26	92.3	2.635	CT	231.2188	0.00	0.04	
1611323-04RE1 H	56.797	162.8	212.0	231.26	231.26	177.6	0.299	OK	231.2188	0.00	0.04	

#16: 1611323-05RE1



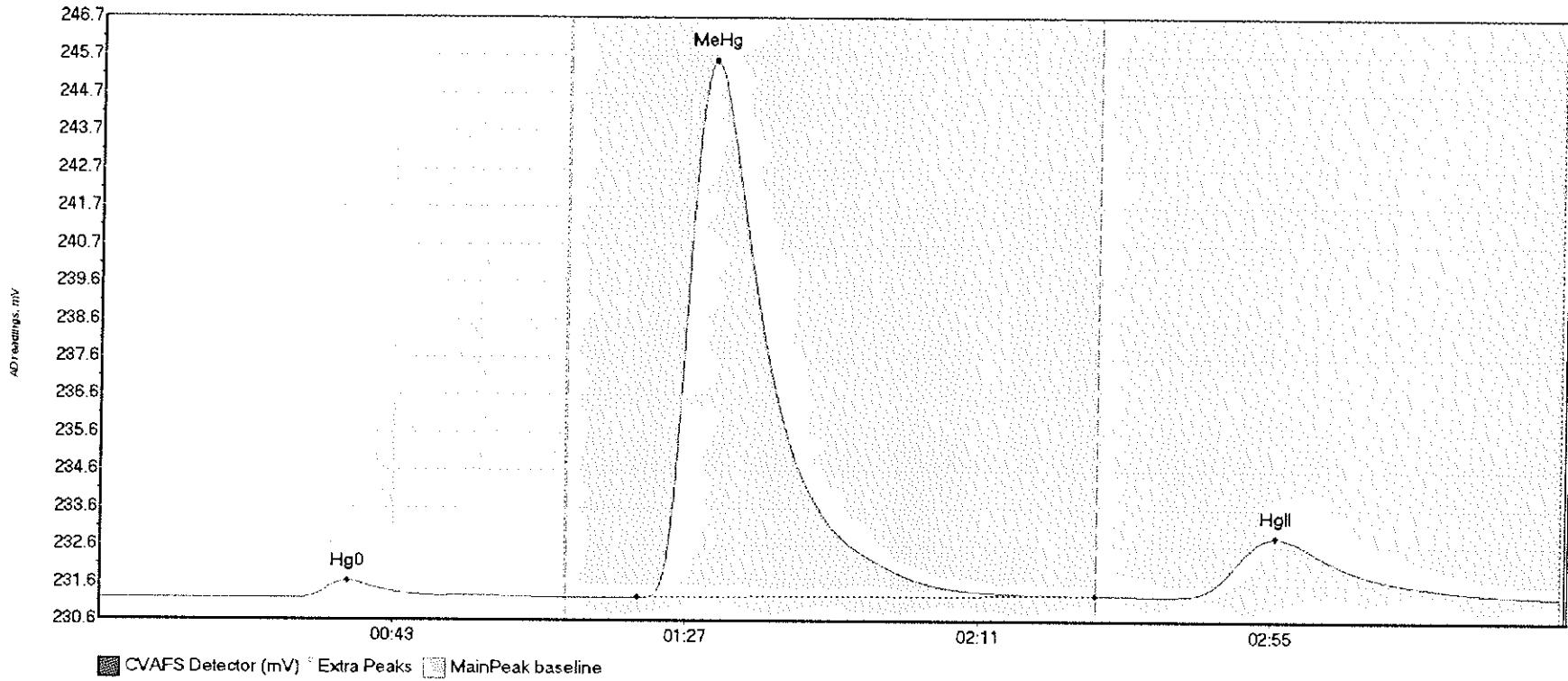
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-05RE1 H	35.436	29.1	67.4	231.22	231.24	37.1	0.335	OK	231.2269	0.00	0.04	
1611323-05RE1 M	237.776	81.8	141.6	231.23	231.24	91.9	1.698	OK	231.2269	0.00	0.04	
1611323-05RE1 H	283.083	162.0	219.8	231.23	231.26	176.7	1.502	CT	231.2269	0.00	0.04	

#17: 1611323-06RE1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-06RE1 H	29.648	29.7	69.9	231.19	231.21	37.8	0.230	CT	231.1972	0.00	0.03	
1611323-06RE1 M	425.428	82.1	149.0	231.21	231.23	92.2	2.957	OK	231.1972	0.00	0.03	
1611323-06RE1 H	38.987	164.4	209.4	231.23	231.23	177.5	0.212	OK	231.1972	0.00	0.03	

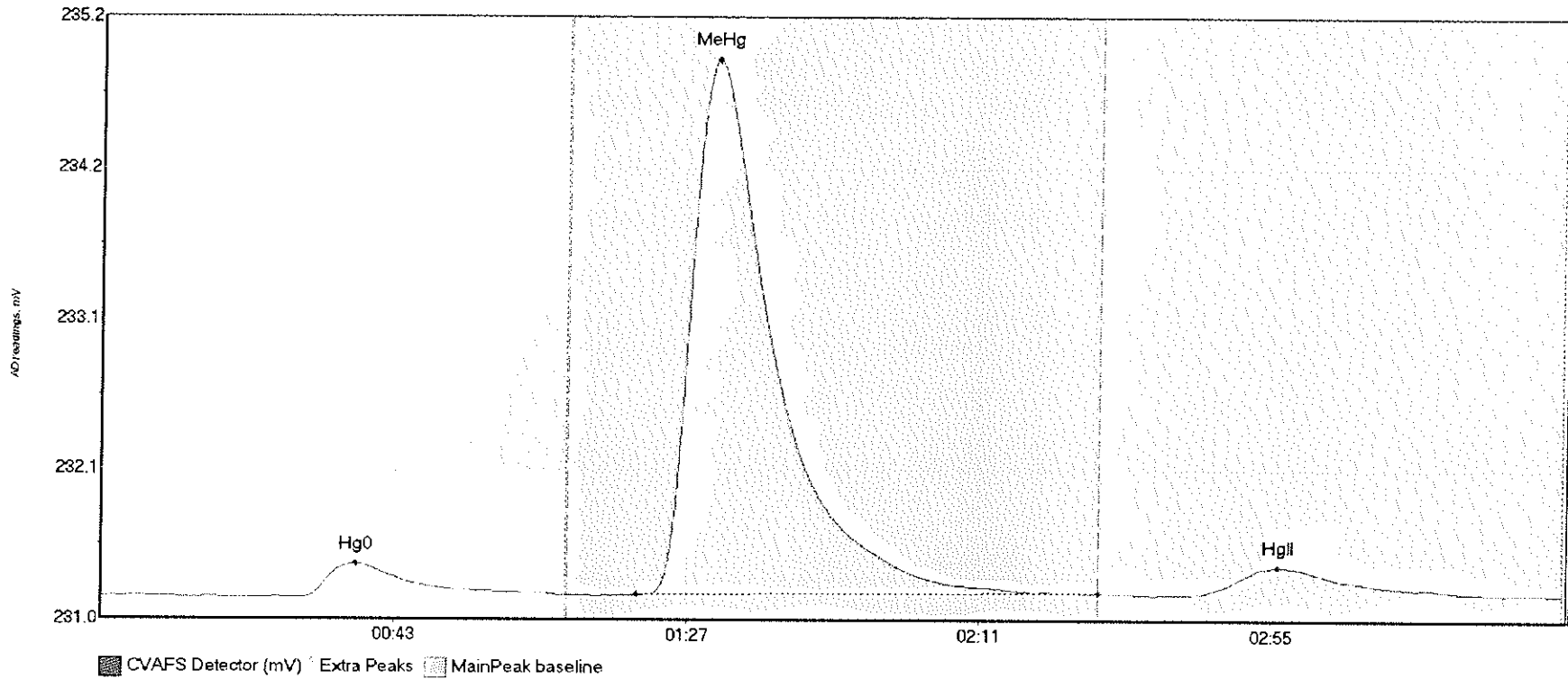
#18: 1611323-07RE1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-07RE1 H	50.953	26.6	69.5	231.18	231.21	37.3	0.458	OK	231.1841	0.00	0.09	
1611323-07RE1 M	2005.556	80.7	149.8	231.22	231.29	92.0	14.315	OK	231.1841	0.00	0.09	
1611323-07RE1 H	296.751	160.2	218.4	231.27	231.27	176.8	1.575	OK	231.1841	0.00	0.09	

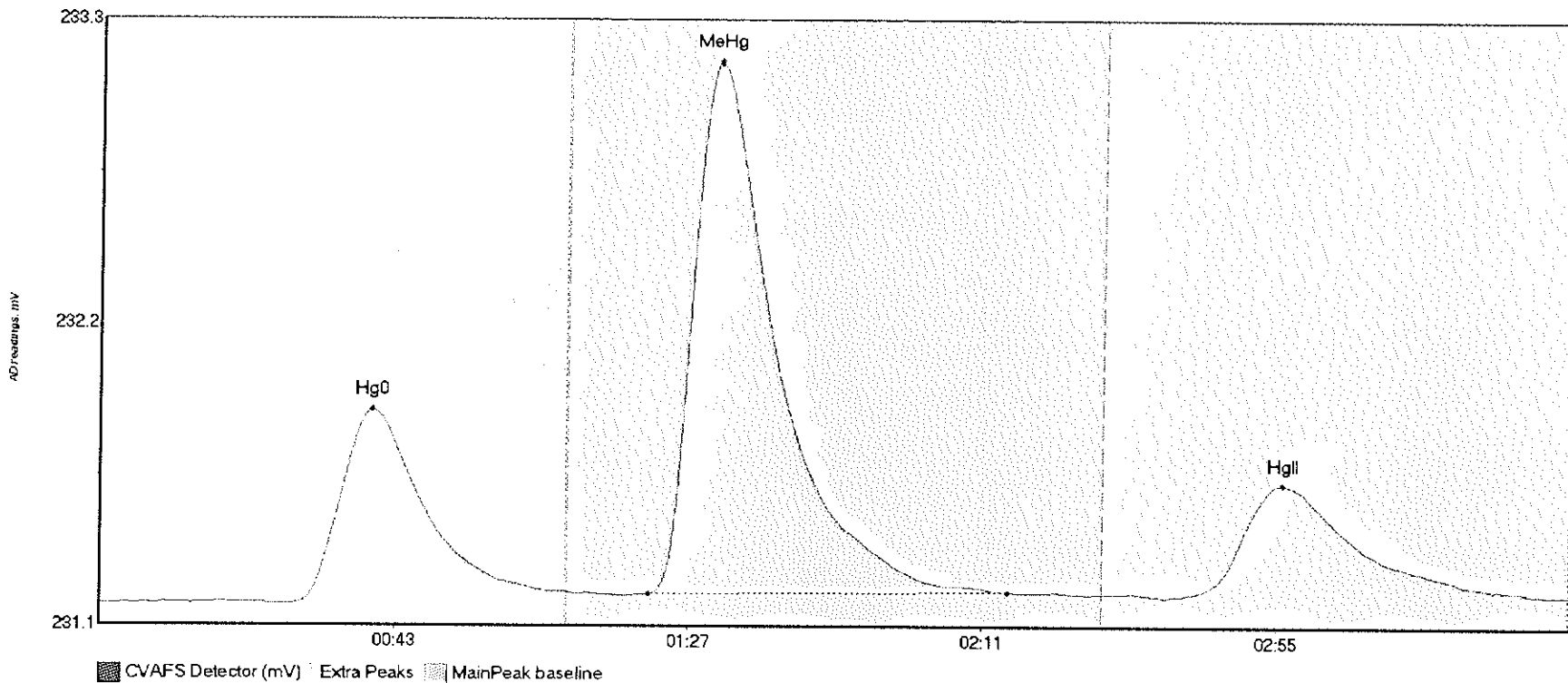


#19: 1611323-08RE1



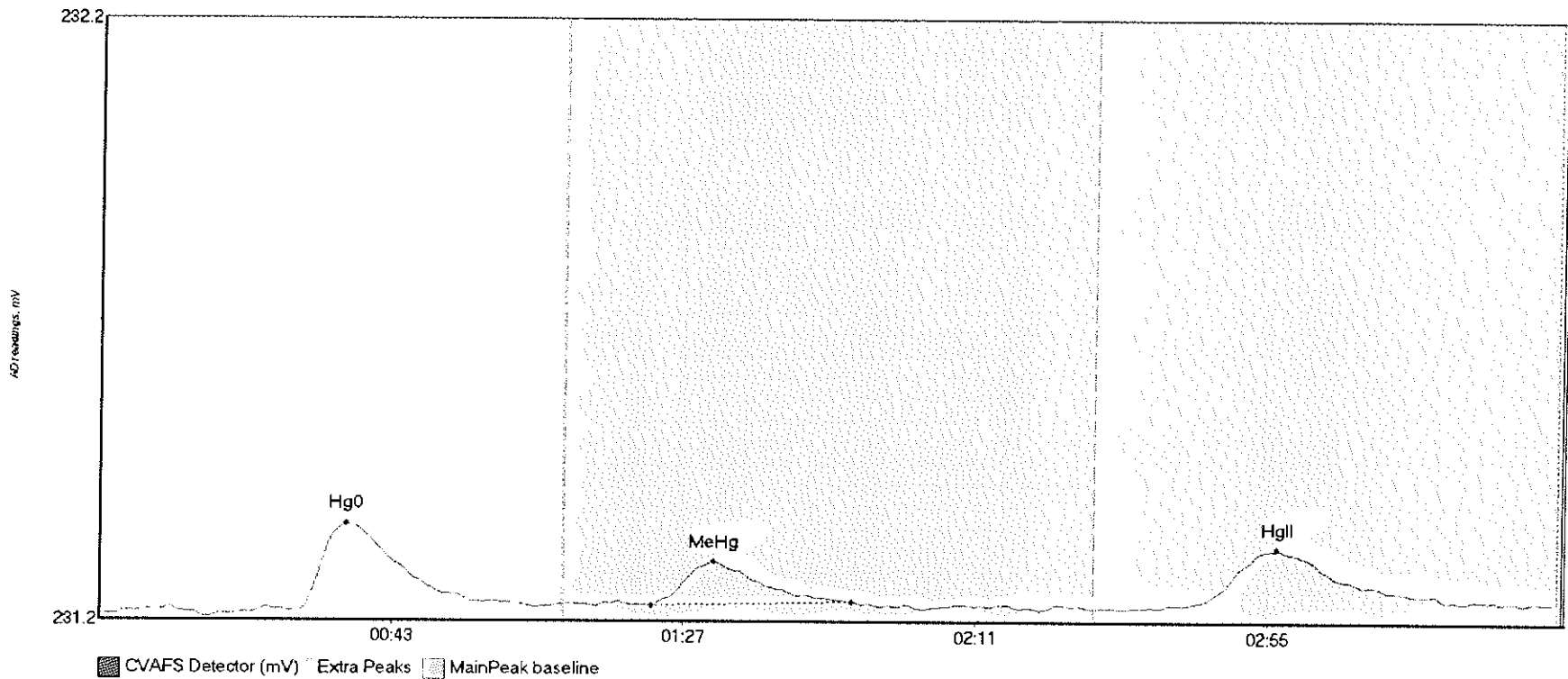
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611323-08RE1 H	32.370	29.6	69.8	231.19	231.21	38.3	0.233	OK	231.1960	0.00	0.02	
1611323-08RE1 M	534.262	80.4	149.9	231.21	231.22	92.3	3.692	OK	231.1960	0.00	0.02	
1611323-08RE1 H	34.267	162.6	205.6	231.21	231.22	177.1	0.195	OK	231.1960	0.00	0.02	

#20: SEQ-CCV1



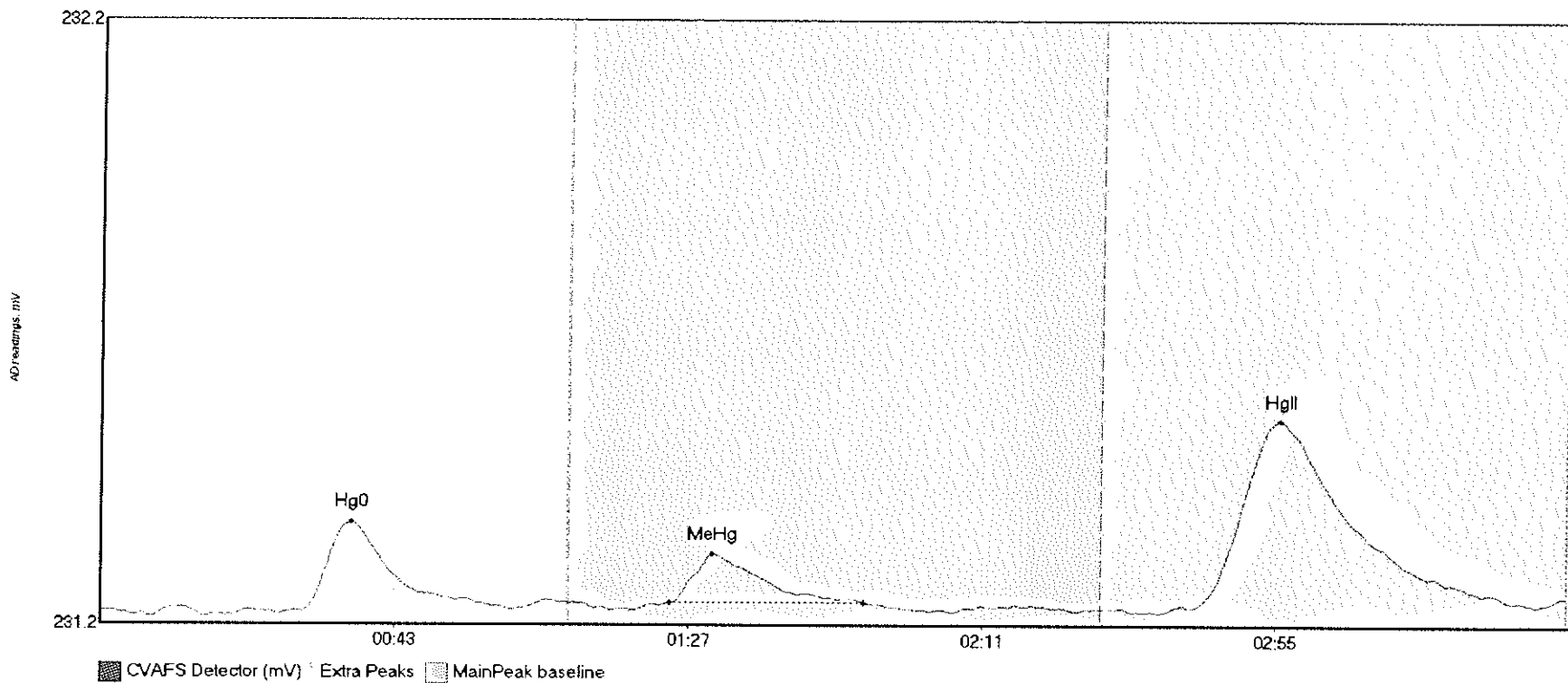
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	ElDev	ElShift	Comment
SEQ-CCV1 Hg0	98.080	28.7	69.9	231.17	231.21	40.6	0.710	CT	231.1688	0.00	0.04	
SEQ-CCV1 MeHg	277.815	82.2	135.9	231.20	231.21	92.3	1.944	OK	231.1688	0.00	0.04	
SEQ-CCV1 HgII	77.899	161.4	214.8	231.20	231.21	176.9	0.412	OK	231.1688	0.00	0.04	

#21: SEQ-CCB1



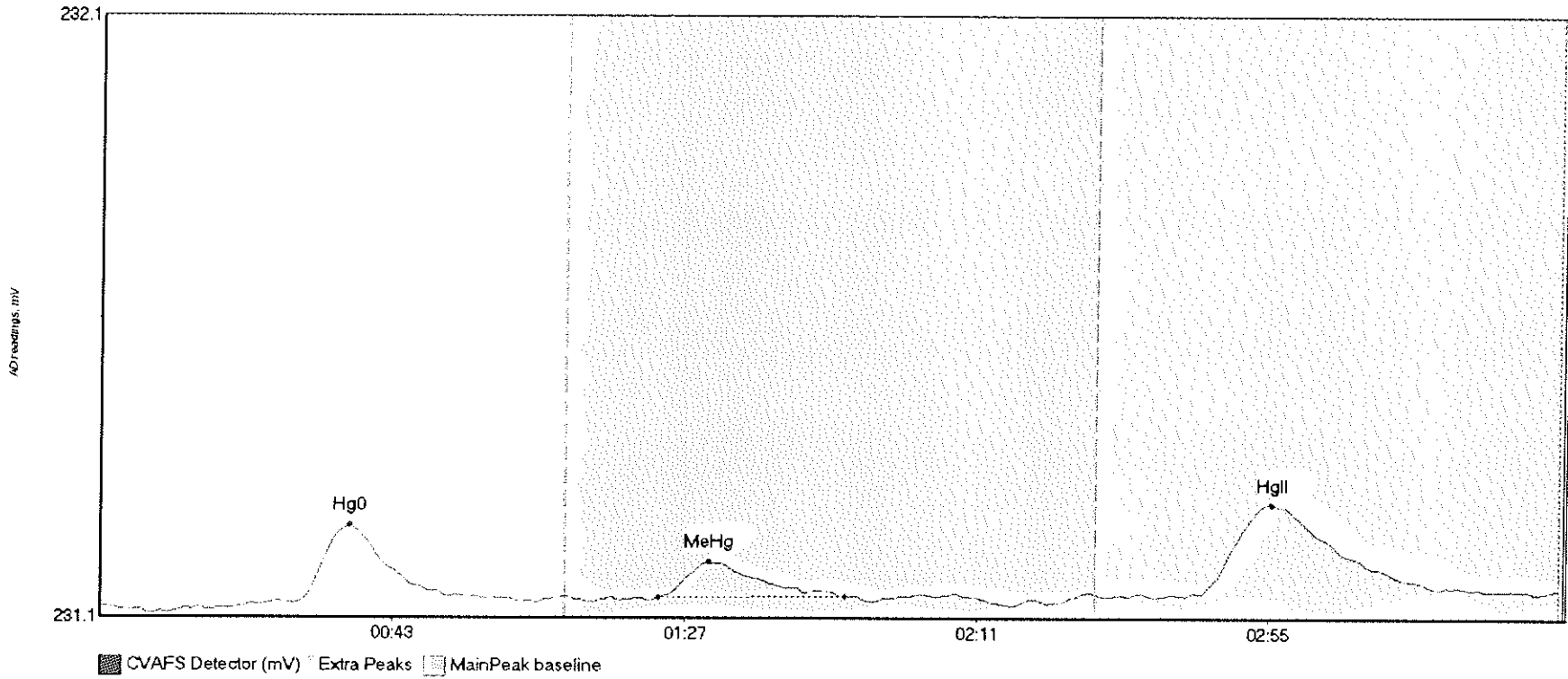
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB1 Hg0	18.897	30.2	65.6	231.19	231.19	37.1	0.143	OK	231.1816	0.00	0.02	
SEQ-CCB1 MeHg	9.092	83.3	113.3	231.19	231.20	92.6	0.074	OK	231.1816	0.00	0.02	
SEQ-CCB1 HgII	18.116	160.1	214.9	231.19	231.20	177.3	0.097	OK	231.1816	0.00	0.02	

#22: F612322-BLK1



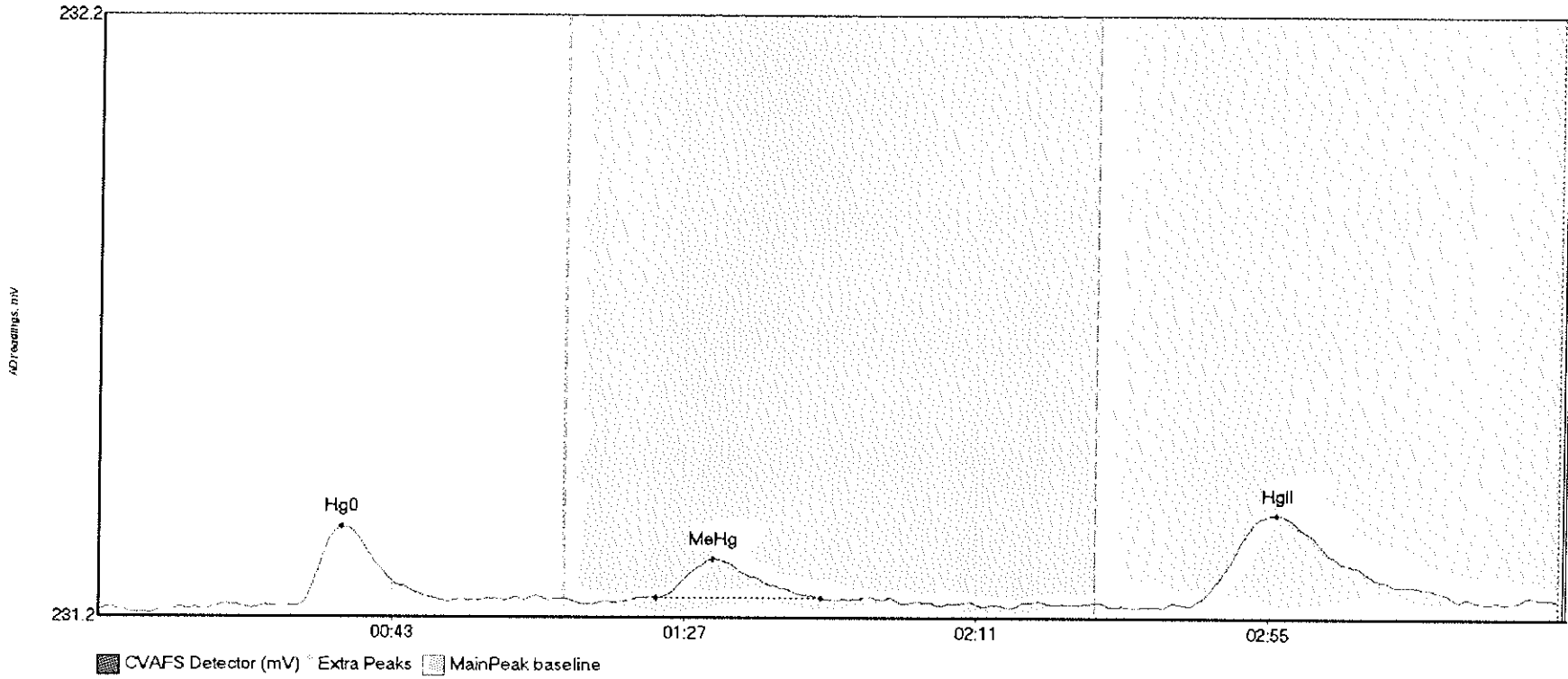
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-BLK1 Hg	15.896	30.1	61.5	231.17	231.18	37.6	0.147	OK	231.1739	0.00	0.02	
F612322-BLK1 Me	9.263	85.1	114.3	231.19	231.19	91.6	0.081	OK	231.1739	0.00	0.02	
F612322-BLK1 Hg	56.682	163.3	215.1	231.18	231.18	176.6	0.312	OK	231.1739	0.00	0.02	

#23: F612322-BLK2



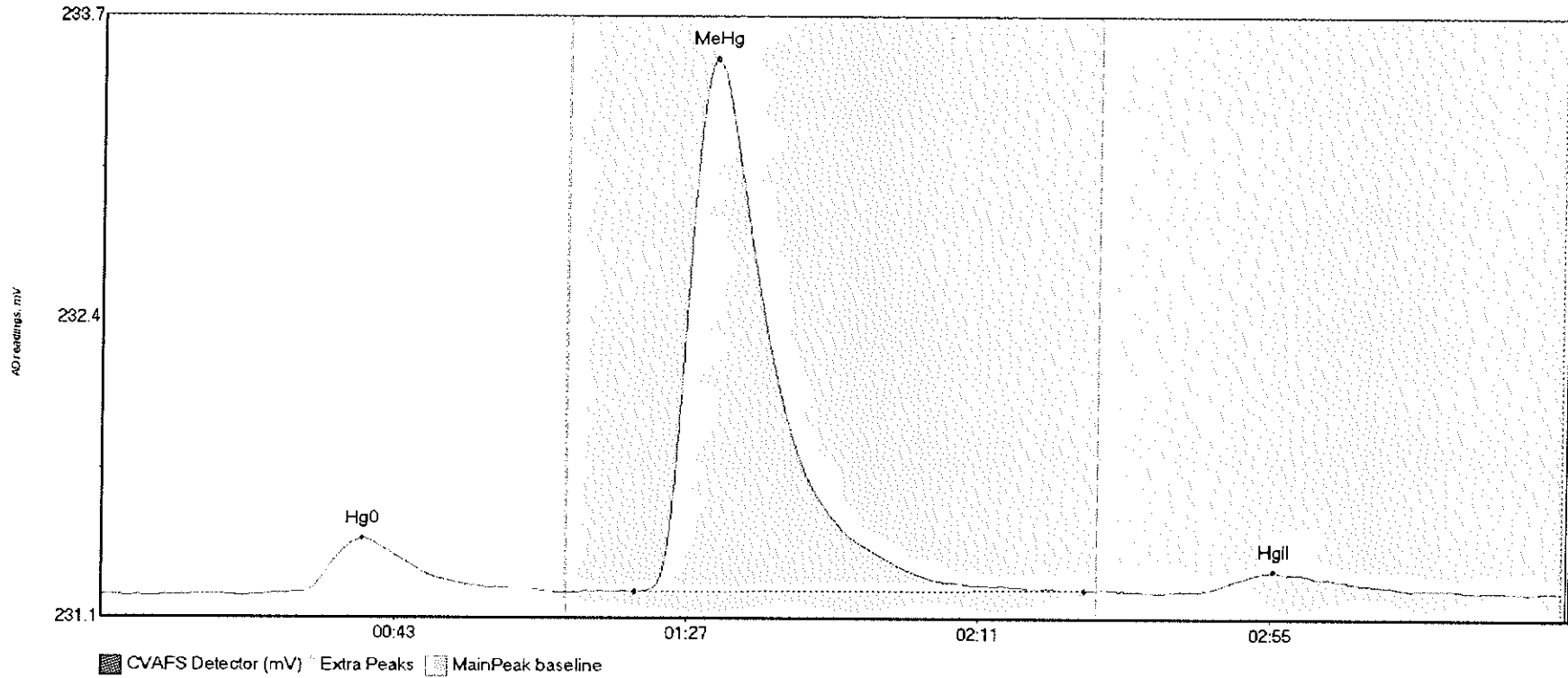
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-BLK2 Hg	15.186	24.9	65.7	231.17	231.17	37.6	0.130	OK	231.1678	0.00	0.03	
F612322-BLK2 Me	7.152	84.0	112.1	231.18	231.19	91.6	0.059	OK	231.1678	0.00	0.03	
F612322-BLK2 Hg	26.202	165.9	216.3	231.19	231.19	176.5	0.149	OK	231.1678	0.00	0.03	

#24: F612322-BLK3



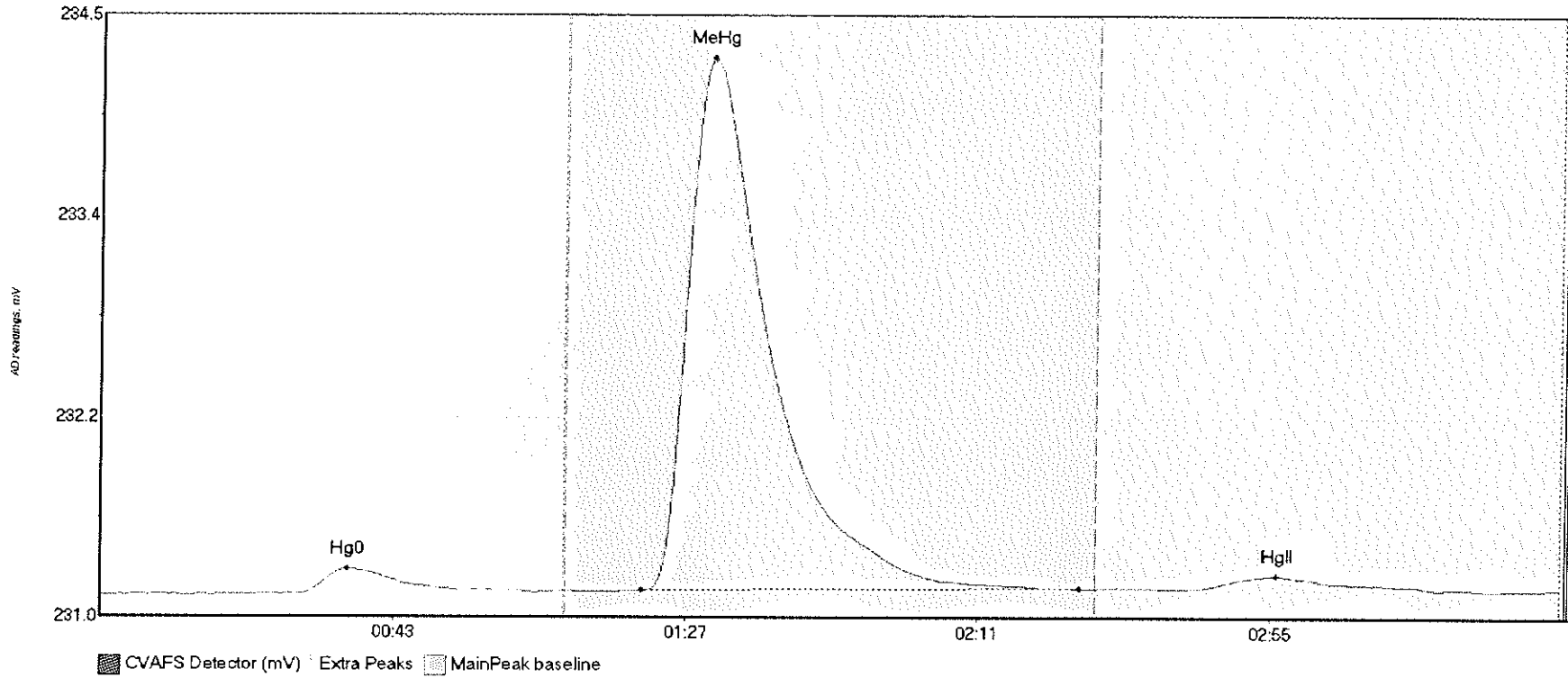
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-BLK3 Hg	12.522	29.6	52.3	231.18	231.19	36.4	0.131	OK	231.1756	0.00	0.02	
F612322-BLK3 Me	7.332	83.8	108.6	231.19	231.19	92.3	0.064	OK	231.1756	0.00	0.02	
F612322-BLK3 Hg	27.103	164.2	204.8	231.18	231.19	177.3	0.153	OK	231.1756	0.00	0.02	

#25: F612322-BS1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment	
F612322-BS1	Hg0	33.642	25.8	69.8	231.18	231.18	39.2	0.240	OK	231.1716	0.00	0.02	
F612322-BS1	MeH	332.892	80.3	148.1	231.19	231.19	92.0	2.320	OK	231.1716	0.00	0.02	
F612322-BS1	HgI	13.434	165.0	196.9	231.19	231.20	176.4	0.086	OK	231.1716	0.00	0.02	

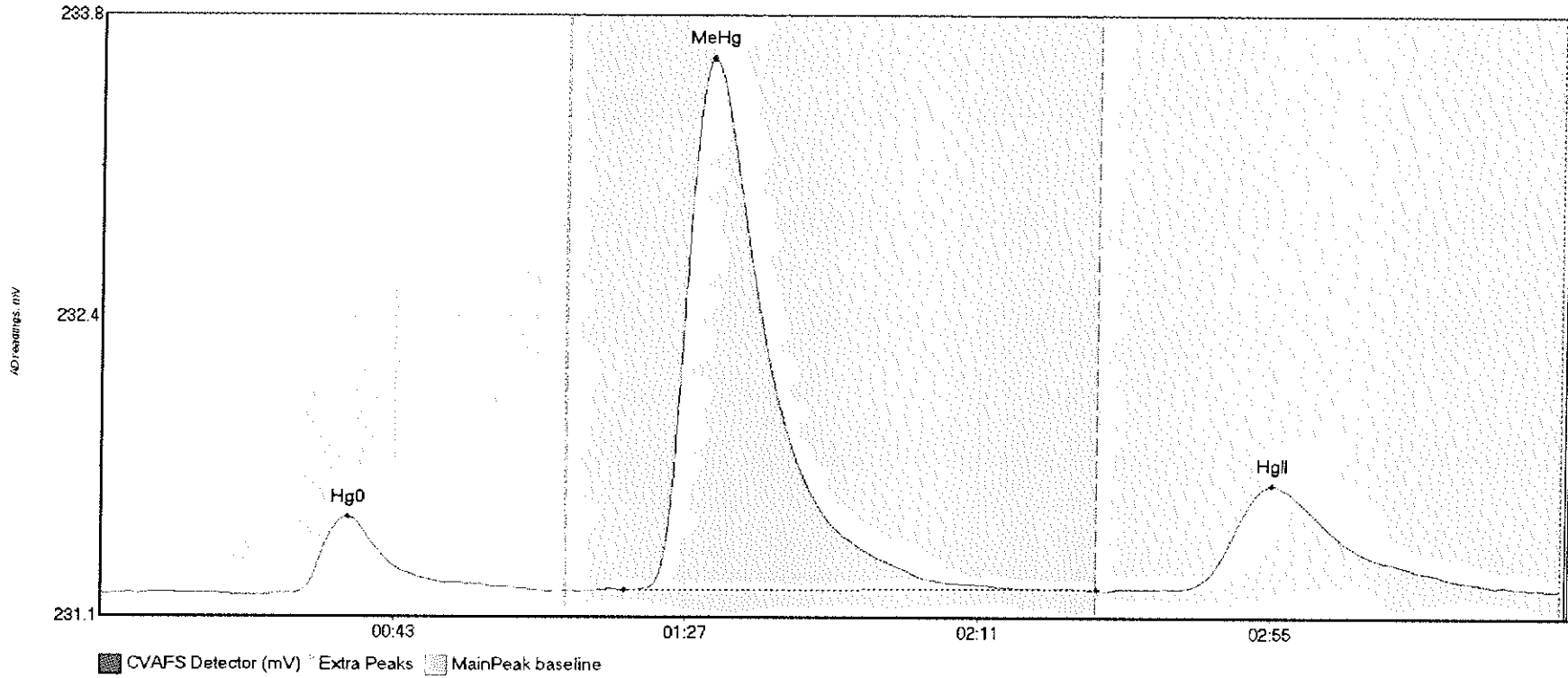
#26: F612322-BSD1



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-BSD1 Hg	19.417	17.0	65.3	231.17	231.19	37.1	0.150	OK	231.1677	0.00	0.04	
F612322-BSD1 Me	442.365	81.4	147.5	231.20	231.21	91.9	3.097	OK	231.1677	0.00	0.04	
F612322-BSD1 Hg	11.829	165.3	199.5	231.21	231.21	177.1	0.075	OK	231.1677	0.00	0.04	

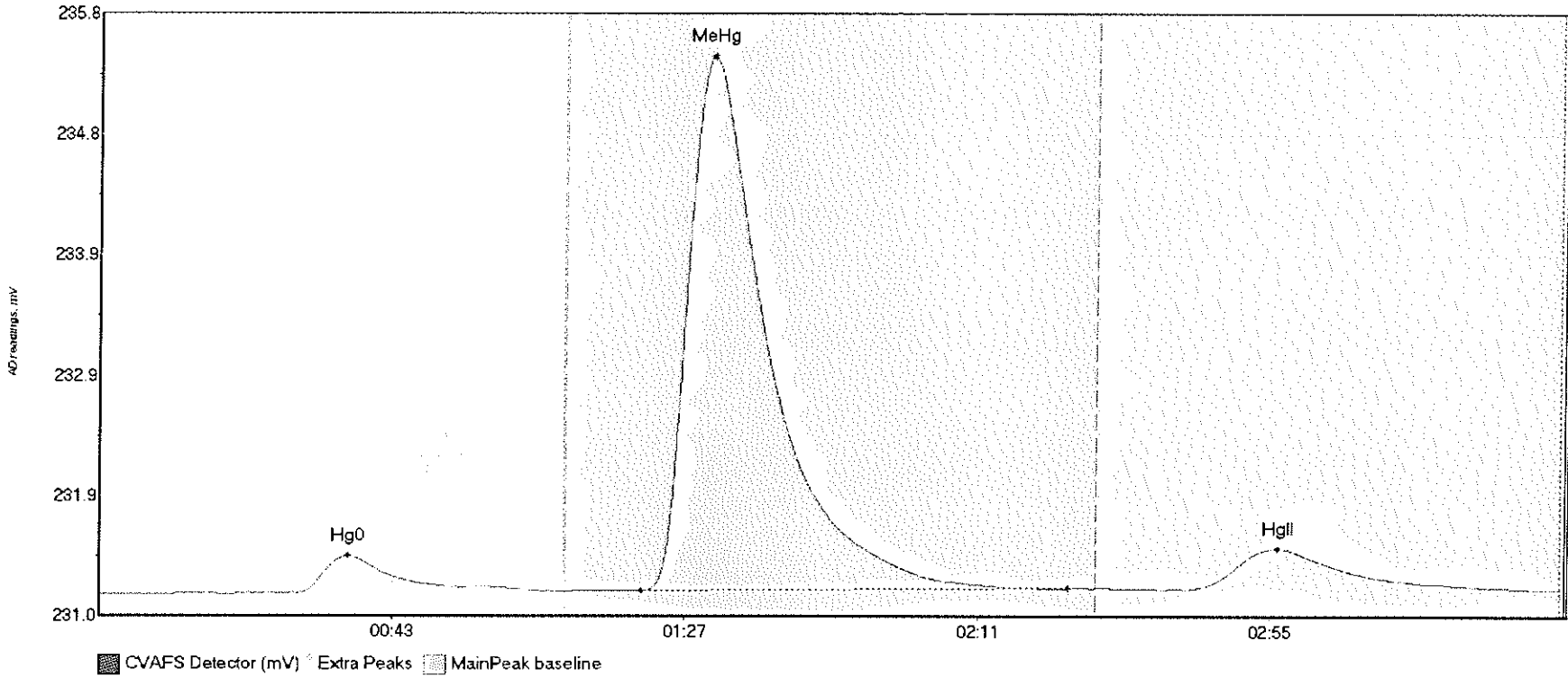


#27: F612322-DUP1



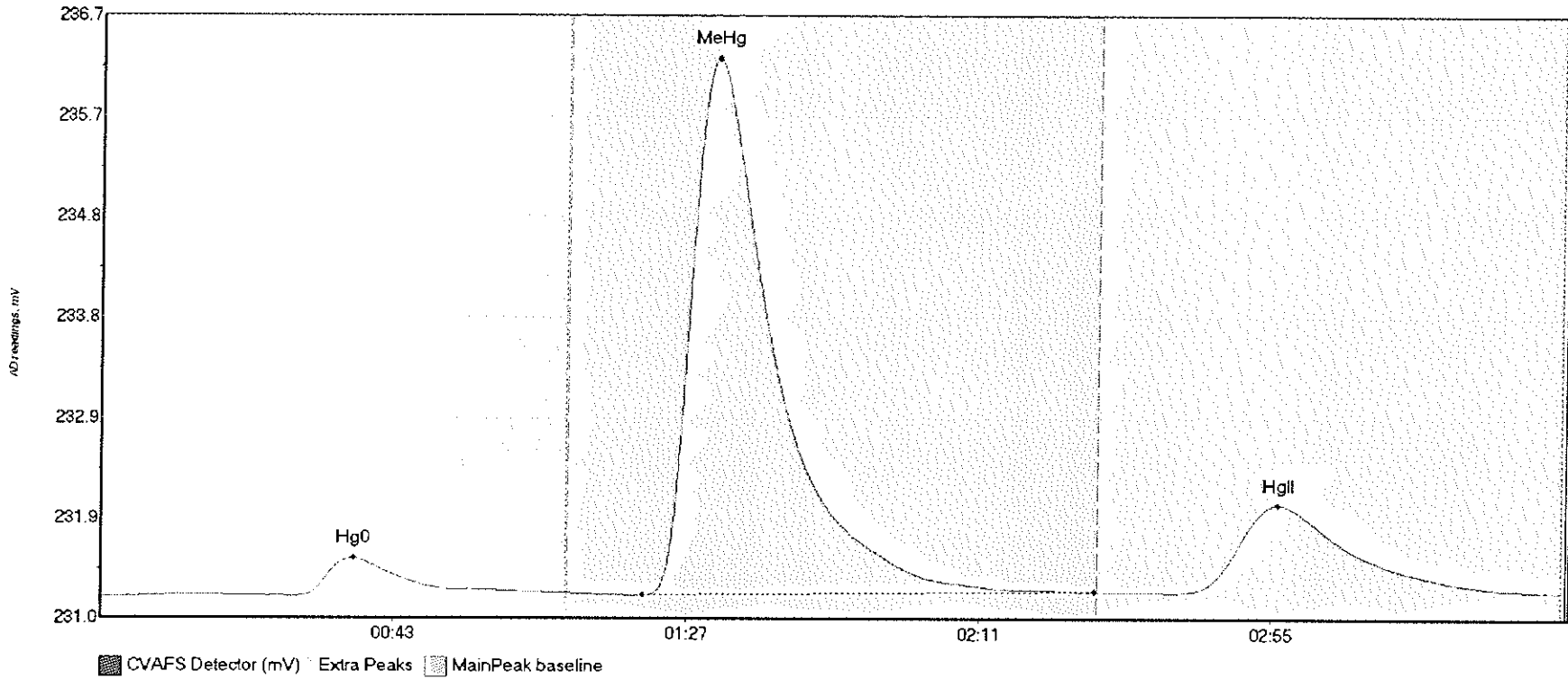
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-DUP1 Hg	39.706	26.4	67.1	231.18	231.19	37.2	0.350	OK	231.1743	0.00	0.03	
F612322-DUP1 Me	340.197	78.9	150.0	231.19	231.20	91.8	2.434	CT	231.1743	0.00	0.03	
F612322-DUP1 Hg	92.737	151.5	218.1	231.19	231.20	176.2	0.485	OK	231.1743	0.00	0.03	

#28: F612322-MS1



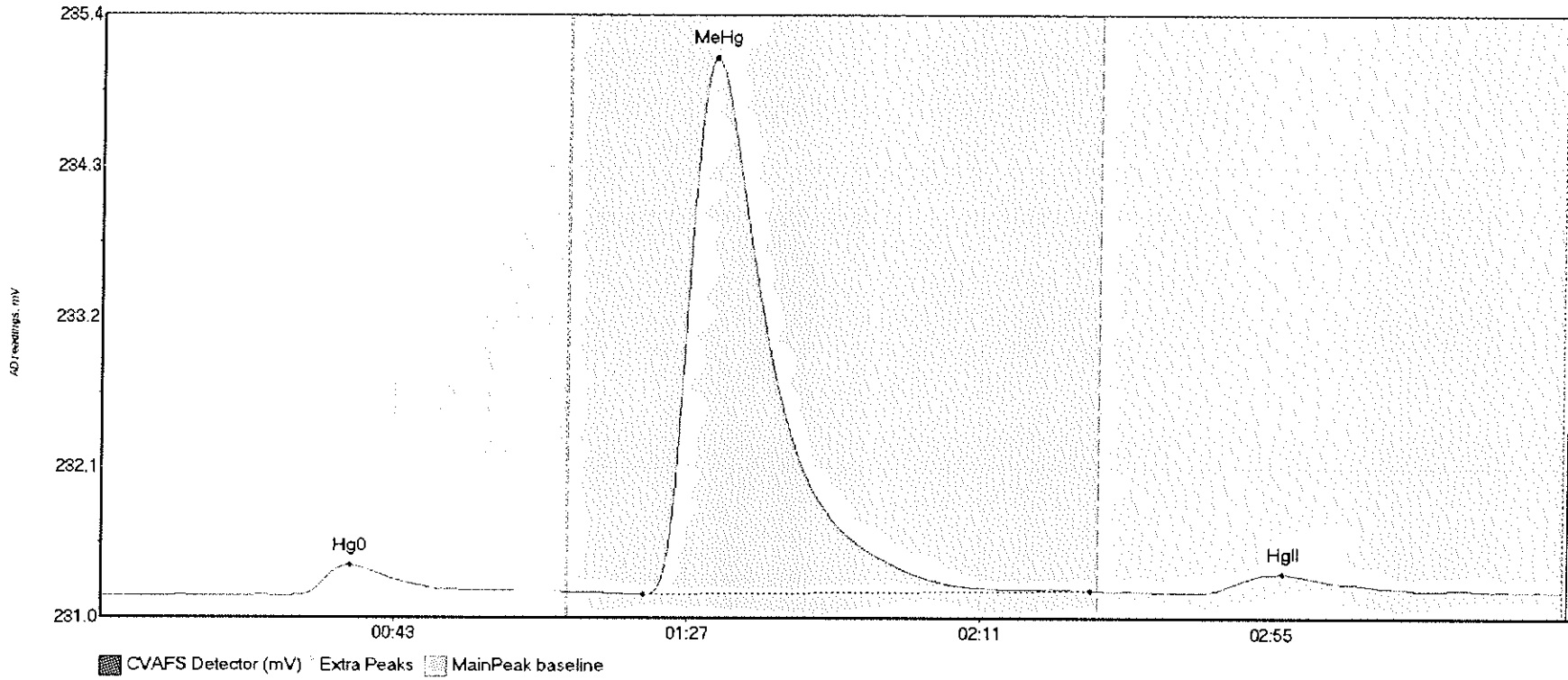
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-MS1 Hg0	37.848	18.6	69.1	231.17	231.19	37.4	0.302	OK	231.1654	0.00	0.04	
F612322-MS1 MeH	590.610	81.4	145.6	231.20	231.22	92.1	4.228	OK	231.1654	0.00	0.04	
F612322-MS1 HgI	55.371	163.7	208.0	231.21	231.22	177.2	0.324	OK	231.1654	0.00	0.04	

#29: F612322-MSD1



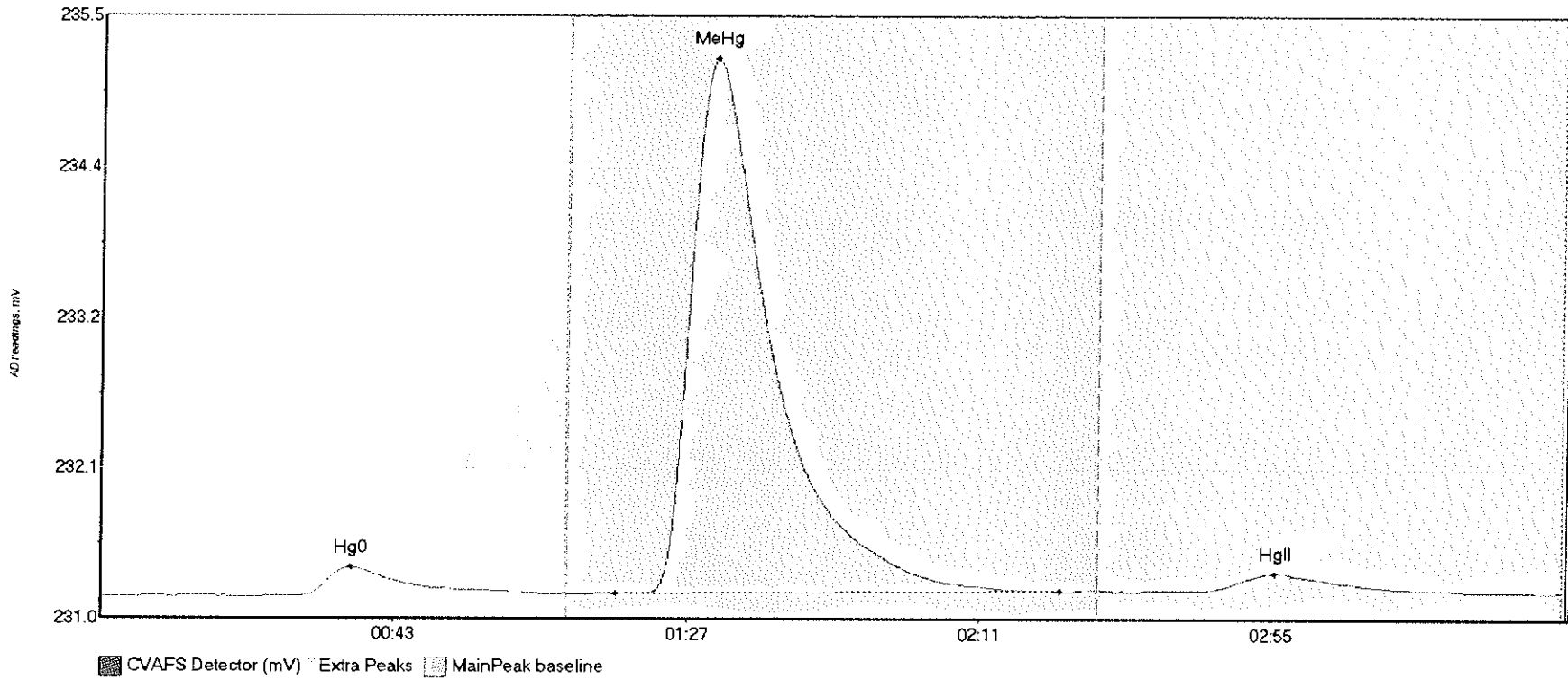
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-MSD1 Hg	43.567	1.6	68.1	231.17	231.21	38.2	0.362	OK	231.1715	0.00	0.05	
F612322-MSD1 Me	731.073	81.5	149.5	231.19	231.22	92.4	5.068	OK	231.1715	0.00	0.05	
F612322-MSD1 Hg	157.421	161.4	216.7	231.21	231.22	177.0	0.835	OK	231.1715	0.00	0.05	

#30: F612322-MS2



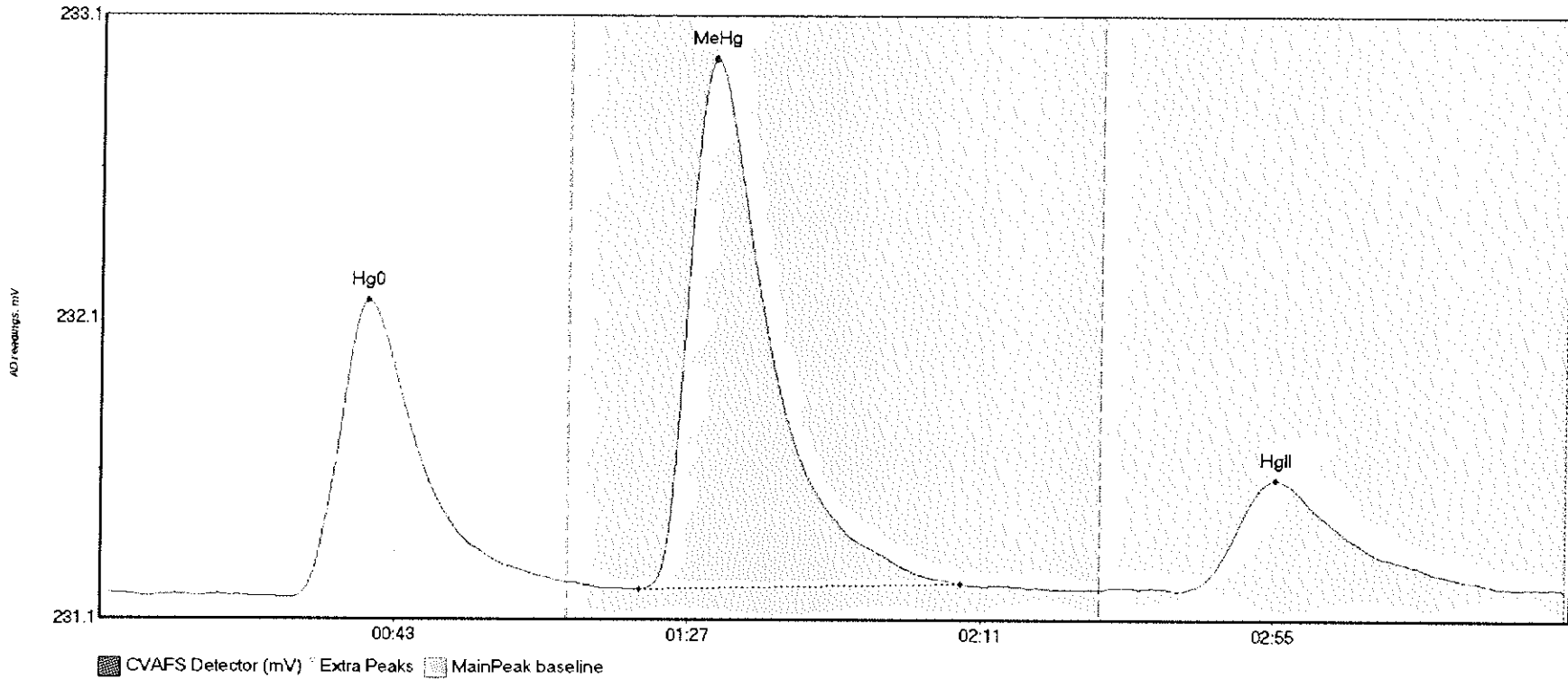
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-MS2 Hg0	27.279	27.2	69.9	231.17	231.20	37.4	0.219	CT	231.1682	0.00	0.03	
F612322-MS2 MeH	560.254	81.5	149.8	231.18	231.21	92.0	3.927	OK	231.1682	0.00	0.03	
F612322-MS2 HgI	21.505	165.0	198.3	231.20	231.21	177.8	0.141	OK	231.1682	0.00	0.03	

#31: F612322-MSD2



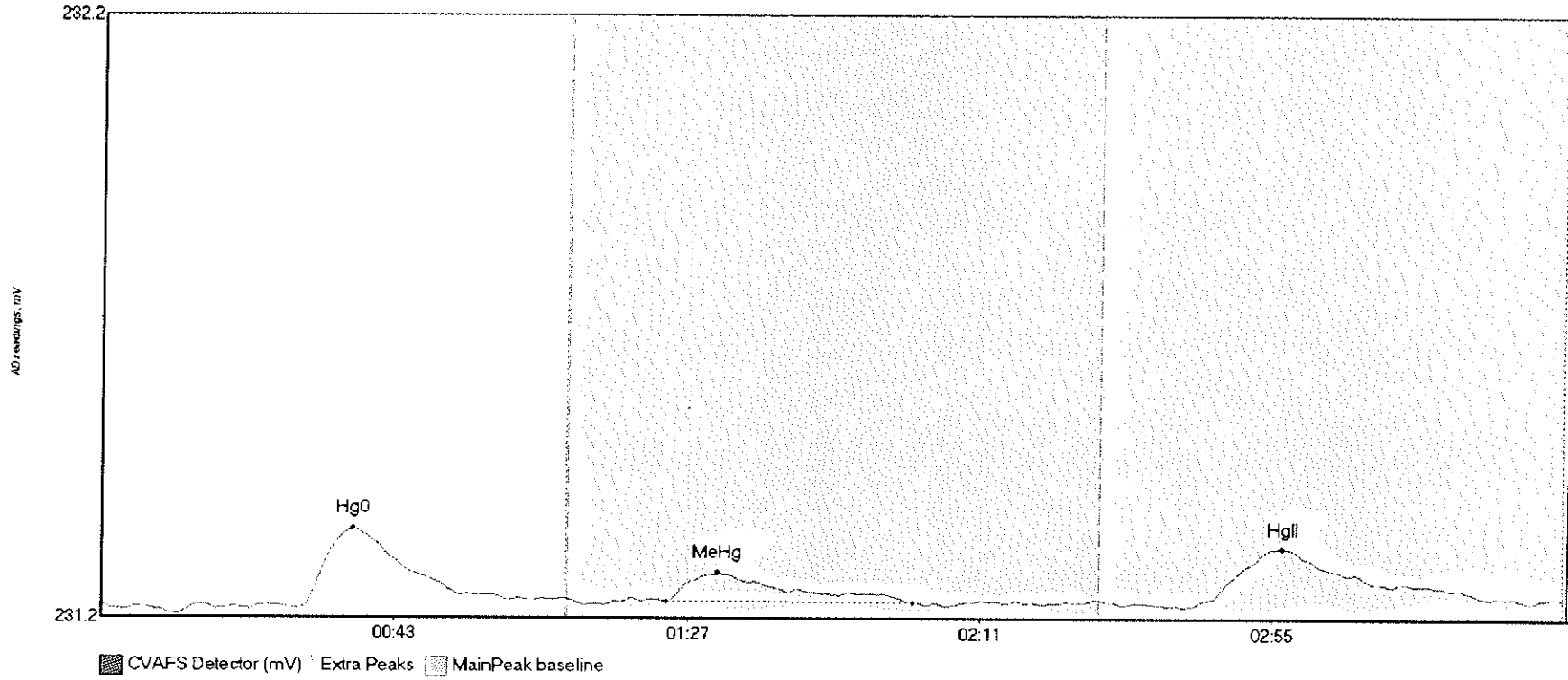
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
F612322-MSD2 Hg	27.130	27.7	66.6	231.18	231.19	37.7	0.212	OK	231.1710	0.00	0.04	
F612322-MSD2 Me	567.388	77.3	144.2	231.19	231.21	92.2	3.963	OK	231.1710	0.00	0.04	
F612322-MSD2 Hg	19.230	165.1	197.6	231.22	231.23	176.6	0.133	OK	231.1710	0.00	0.04	

#32: SEQ-CCV2



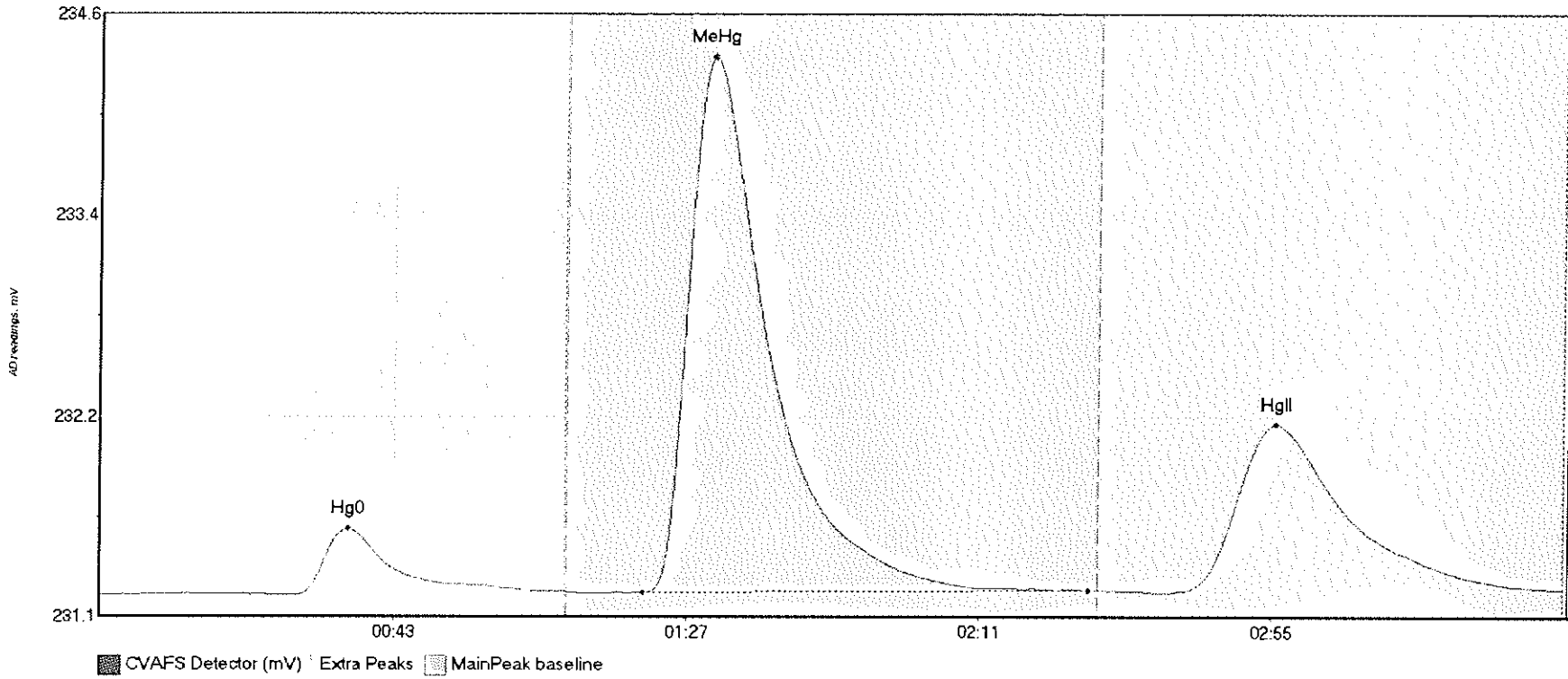
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV2 Hg0	129.840	28.2	69.8	231.18	231.23	39.9	0.960	OK	231.1931	0.00	0.01	
SEQ-CCV2 MeHg	241.146	80.8	129.0	231.20	231.22	91.8	1.711	OK	231.1931	0.00	0.01	
SEQ-CCV2 HgII	67.421	161.8	212.1	231.20	231.21	176.3	0.360	OK	231.1931	0.00	0.01	

#33: SEQ-CCB2



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB2 Hg0	17.313	29.5	64.4	231.17	231.19	37.9	0.131	OK	231.1785	0.00	0.01	
SEQ-CCB2 MeHg	8.341	84.7	122.0	231.19	231.18	92.5	0.046	OK	231.1785	0.00	0.01	
SEQ-CCB2 HgII	16.169	166.9	213.4	231.19	231.19	177.6	0.084	OK	231.1785	0.00	0.01	

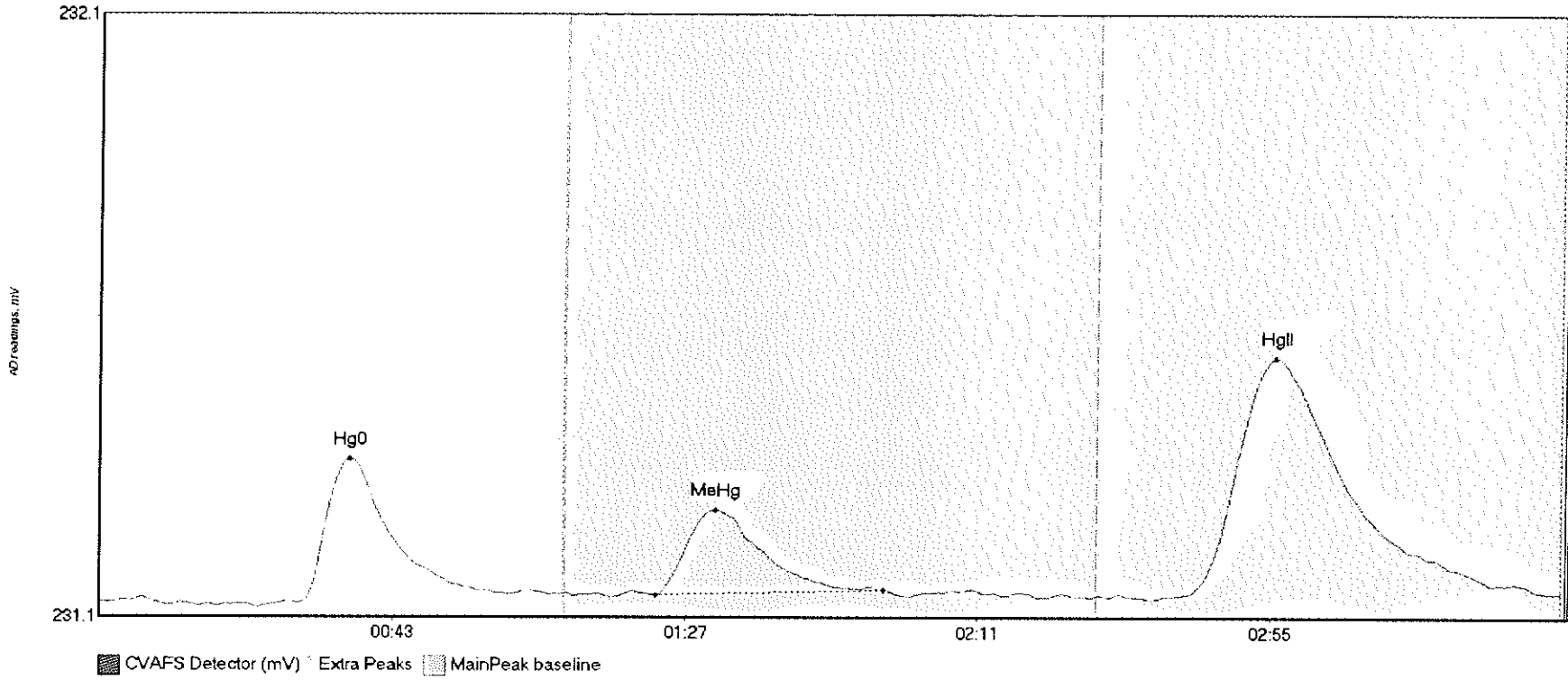
#34: 1611325-01



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611325-01 Hg0	44.743	28.8	69.9	231.18	231.21	37.2	0.389	CT	231.1860	0.00	0.03	
1611325-01 MeHg	440.483	81.5	148.4	231.20	231.21	91.9	3.144	OK	231.1860	0.00	0.03	
1611325-01 HgII	183.082	162.8	218.4	231.21	231.22	176.6	0.981	OK	231.1860	0.00	0.03	

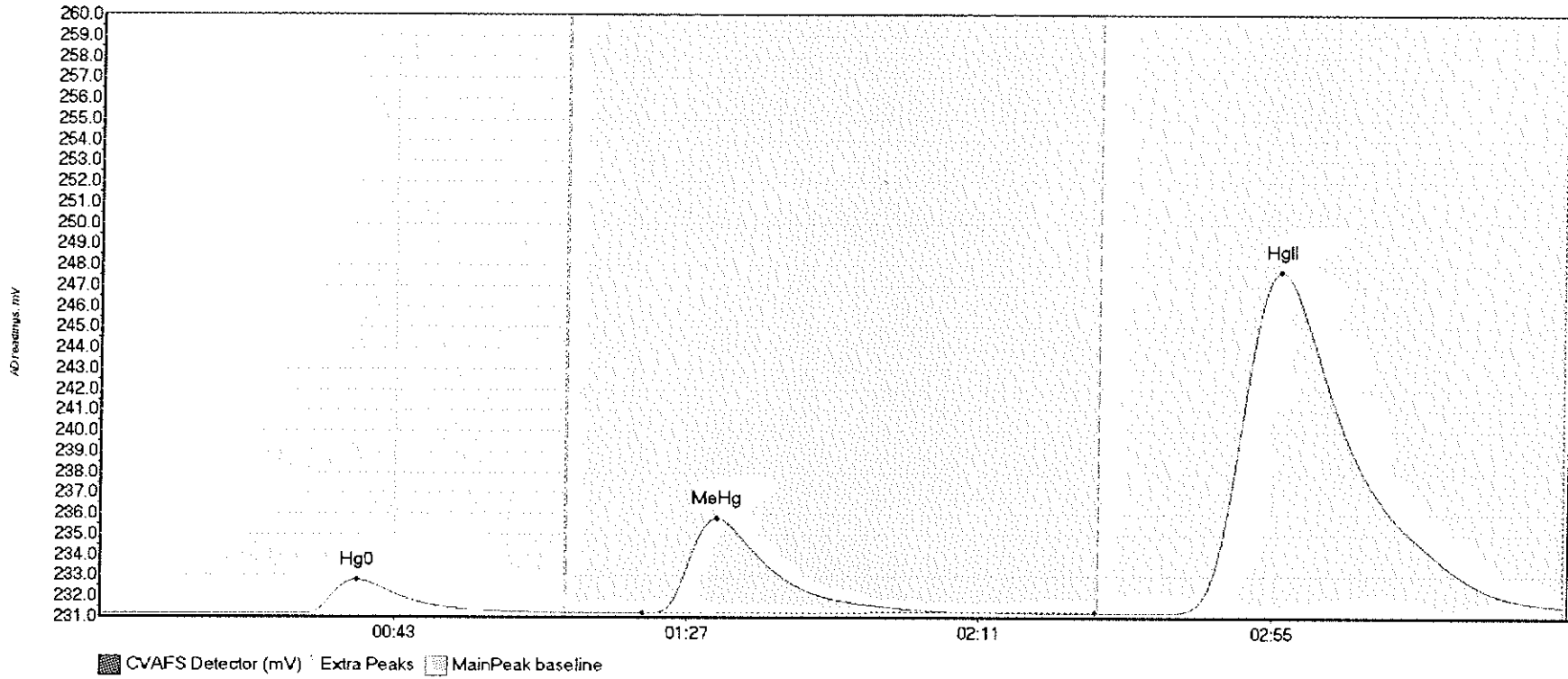


#35: 1611325-02



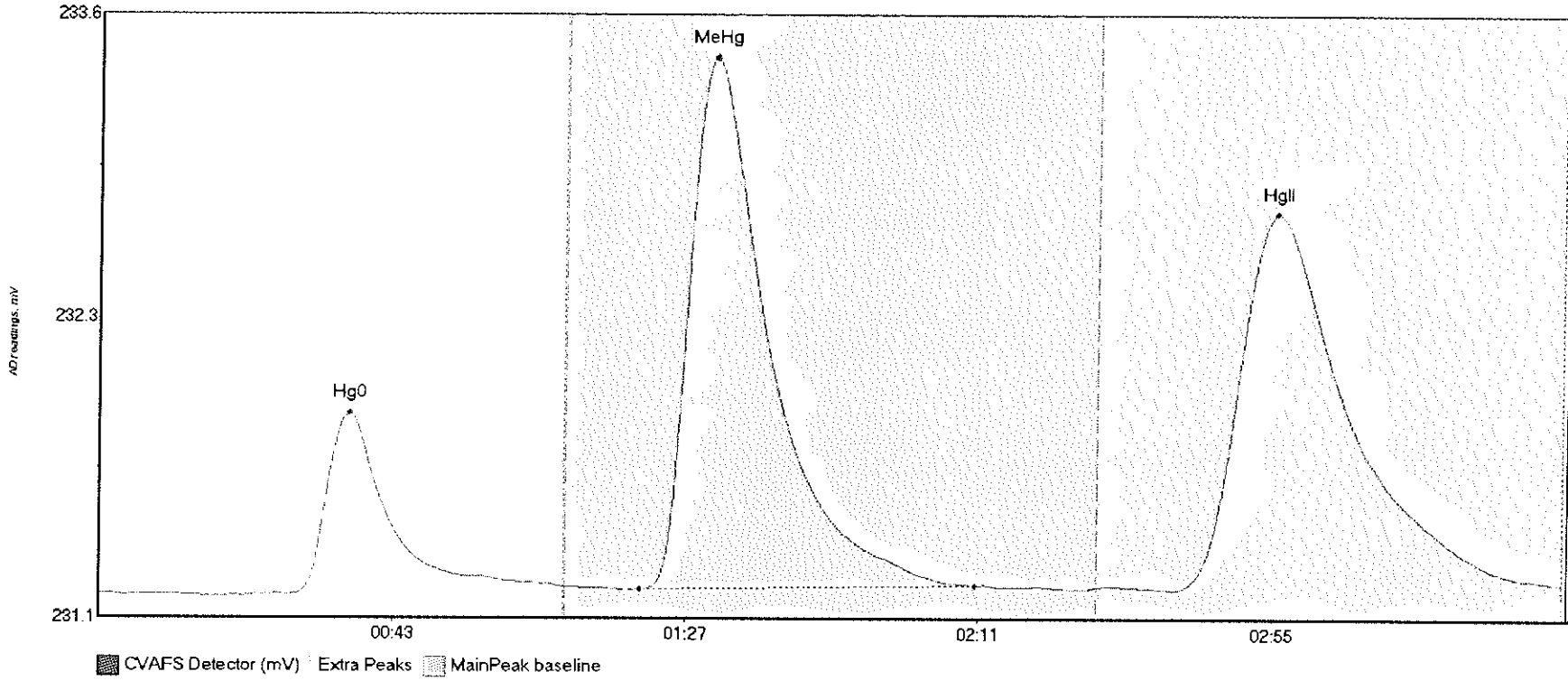
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611325-02 Hg0	26.601	29.7	67.8	231.17	231.19	37.6	0.240	OK	231.1741	0.00	0.02	
1611325-02 MeHg	17.992	83.6	117.9	231.19	231.19	92.5	0.140	OK	231.1741	0.00	0.02	
1611325-02 HgII	73.723	163.5	218.4	231.19	231.19	176.8	0.394	OK	231.1741	0.00	0.02	

#36: 1611325-03



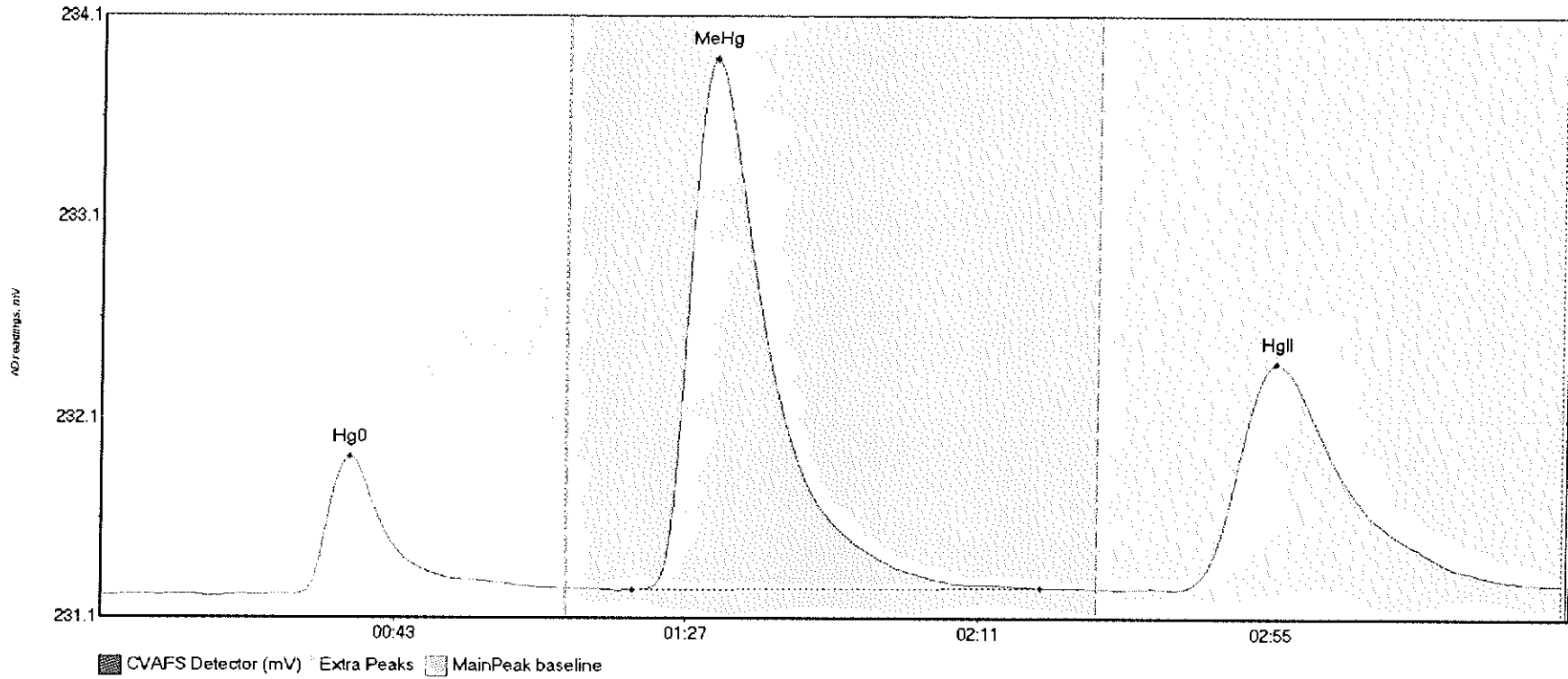
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611325-03 Hg0	199.043	24.4	69.3	231.18	231.23	38.5	1.623	OK	231.1742	0.00	0.38	
1611325-03 MeHg	655.369	81.5	149.5	231.21	231.23	92.5	4.560	OK	231.1742	0.00	0.38	
1611325-03 HgII	3126.169	159.4	219.8	231.23	231.55	177.2	16.456	CT	231.1742	0.00	0.38	

#37: 1611325-04



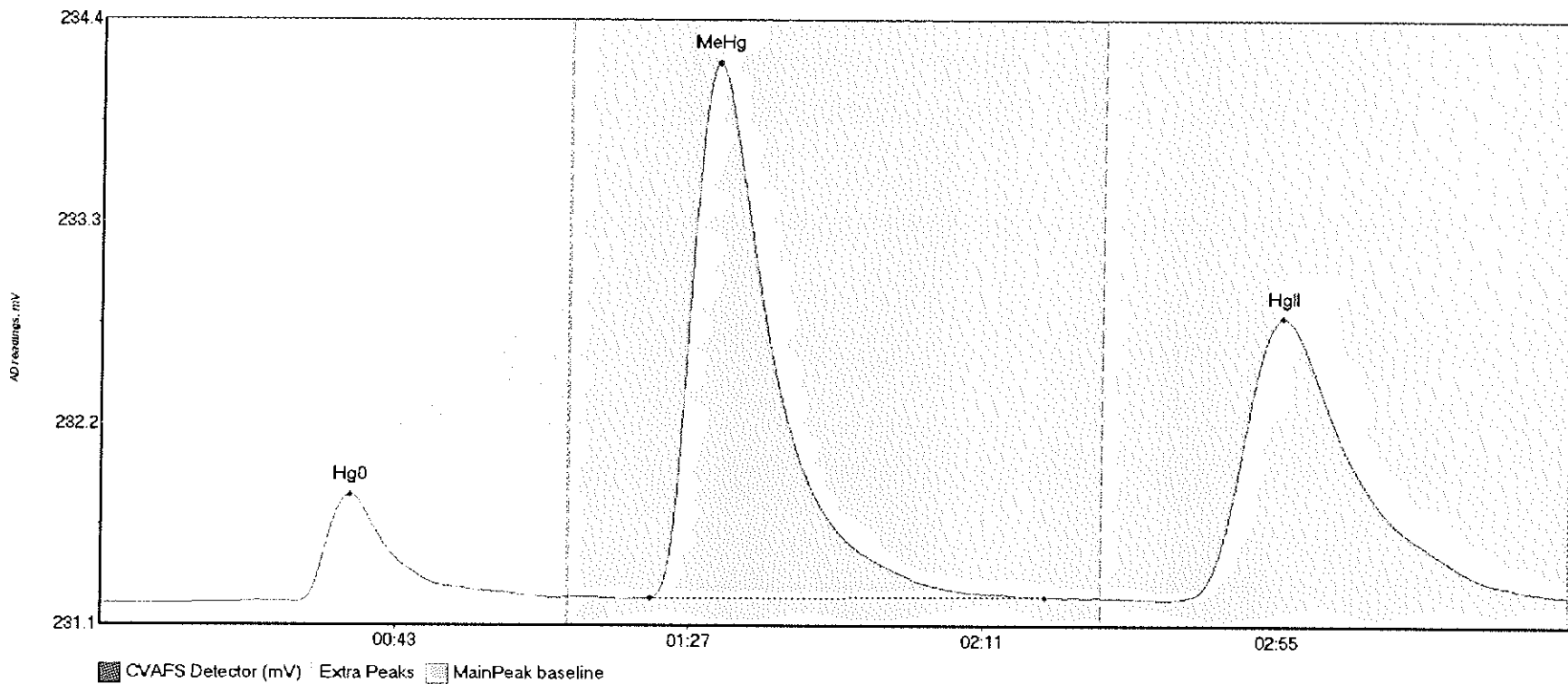
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BlShift	Comment
1611325-04 Hg0	78.771	28.2	69.9	231.19	231.22	37.4	0.755	CT	231.1915	0.00	0.05	
1611325-04 MeHg	303.985	81.2	131.6	231.21	231.22	92.1	2.214	OK	231.1915	0.00	0.05	
1611325-04 HgII	294.890	161.4	218.8	231.21	231.24	176.5	1.572	OK	231.1915	0.00	0.05	

#38: 1611325-05



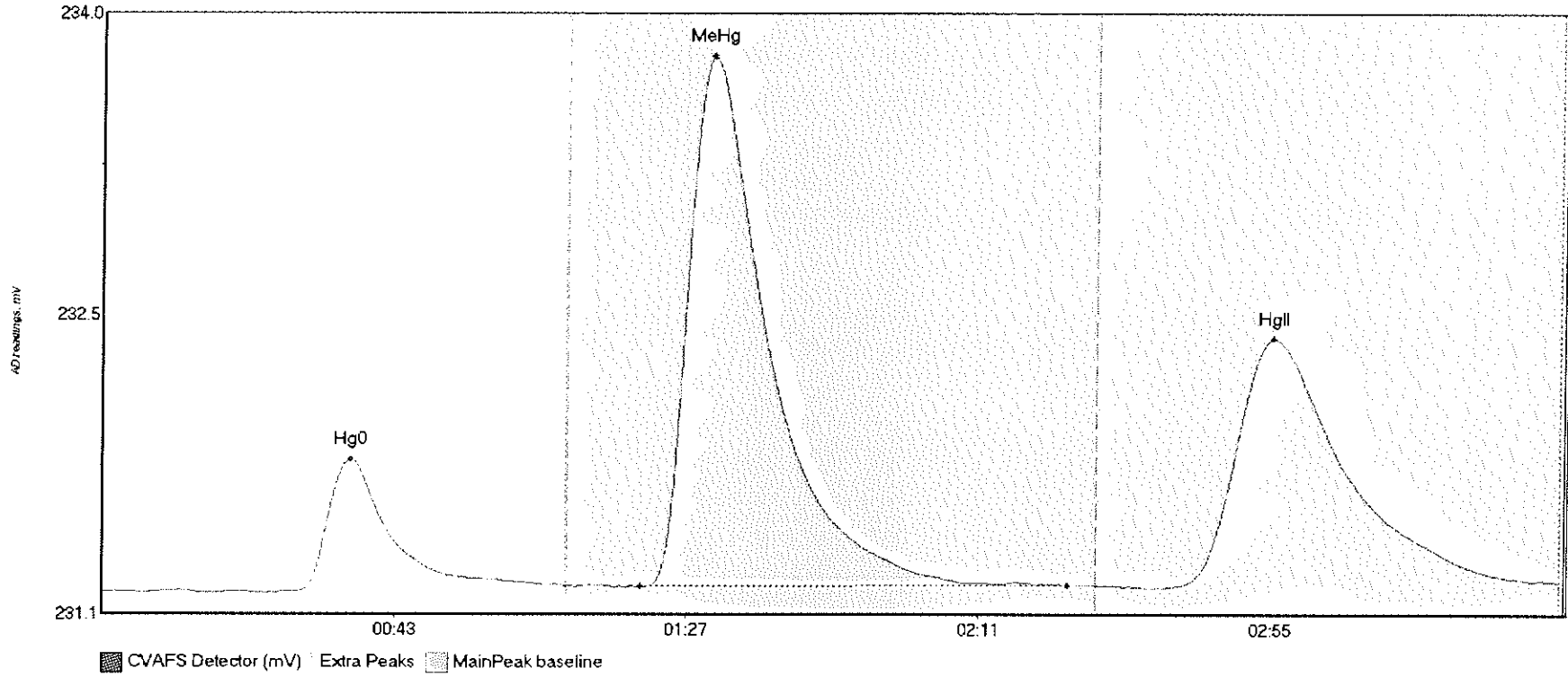
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611325-05 Hg0	72.133	28.7	69.4	231.19	231.22	37.3	0.699	OK	231.1831	0.00	0.06	
1611325-05 MeHg	371.526	80.0	141.4	231.21	231.22	92.1	2.708	OK	231.1831	0.00	0.06	
1611325-05 HgII	212.609	161.5	219.8	231.21	231.24	176.6	1.157	CT	231.1831	0.00	0.06	

#39: 1611325-06



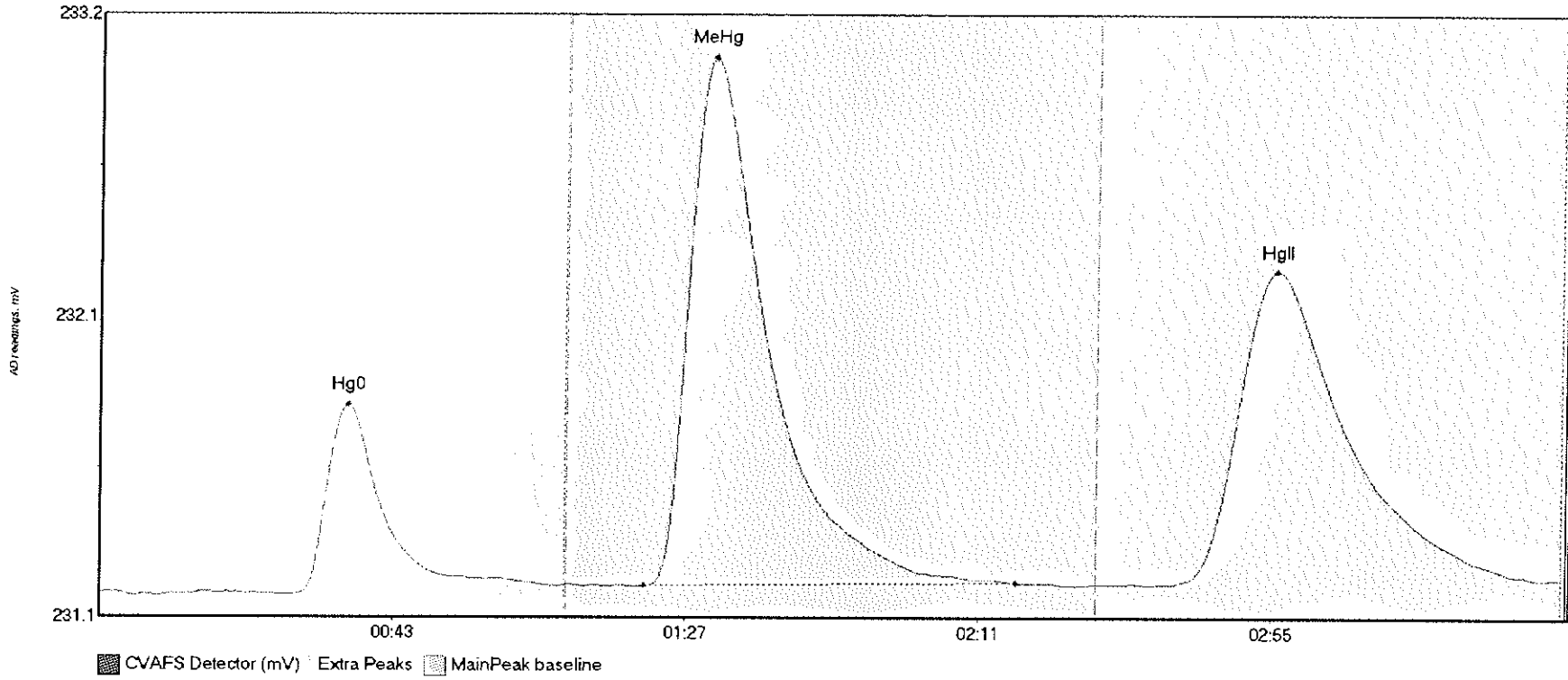
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611325-06 Hg0	66.536	20.2	68.6	231.19	231.22	37.3	0.601	OK	231.1909	0.00	0.05	
1611325-06 MeHg	416.244	82.3	141.4	231.22	231.23	92.0	2.970	OK	231.1909	0.00	0.05	
1611325-06 HgII	293.841	160.5	219.0	231.21	231.24	176.6	1.568	OK	231.1909	0.00	0.05	

#40: 1611326-01



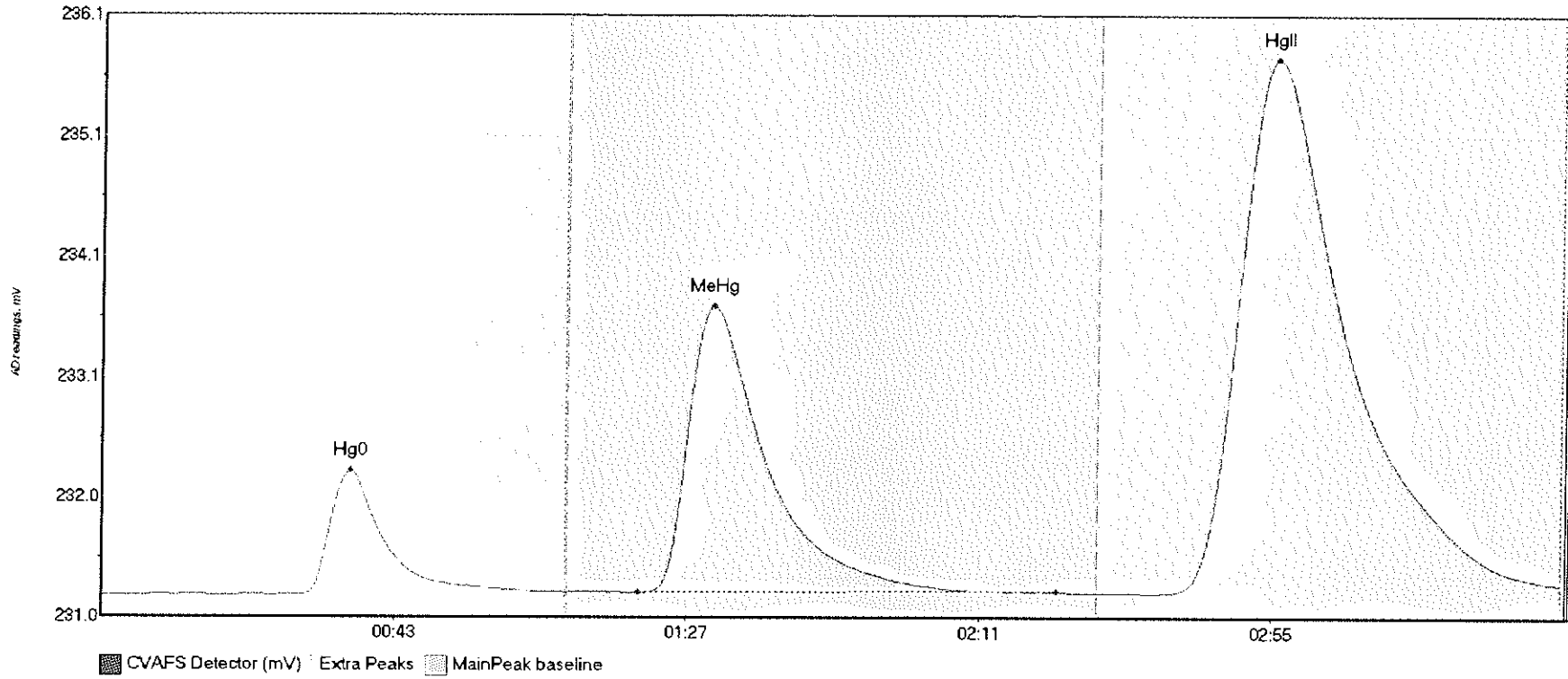
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-01 Hg0	67.235	29.0	69.9	231.19	231.22	37.4	0.637	CT	231.1921	0.00	0.05	
1611326-01 MeHg	354.124	81.1	145.6	231.22	231.23	91.9	2.555	OK	231.1921	0.00	0.05	
1611326-01 HgII	223.927	159.3	219.8	231.21	231.24	176.3	1.202	CT	231.1921	0.00	0.05	

#41: 1611326-02



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-02 Hg0	61.932	29.2	68.9	231.19	231.22	37.3	0.643	OK	231.1992	0.00	0.05	
1611326-02 MeHg	246.499	81.8	137.8	231.22	231.23	92.1	1.794	OK	231.1992	0.00	0.05	
1611326-02 HgII	198.184	161.3	216.7	231.23	231.24	176.6	1.066	OK	231.1992	0.00	0.05	

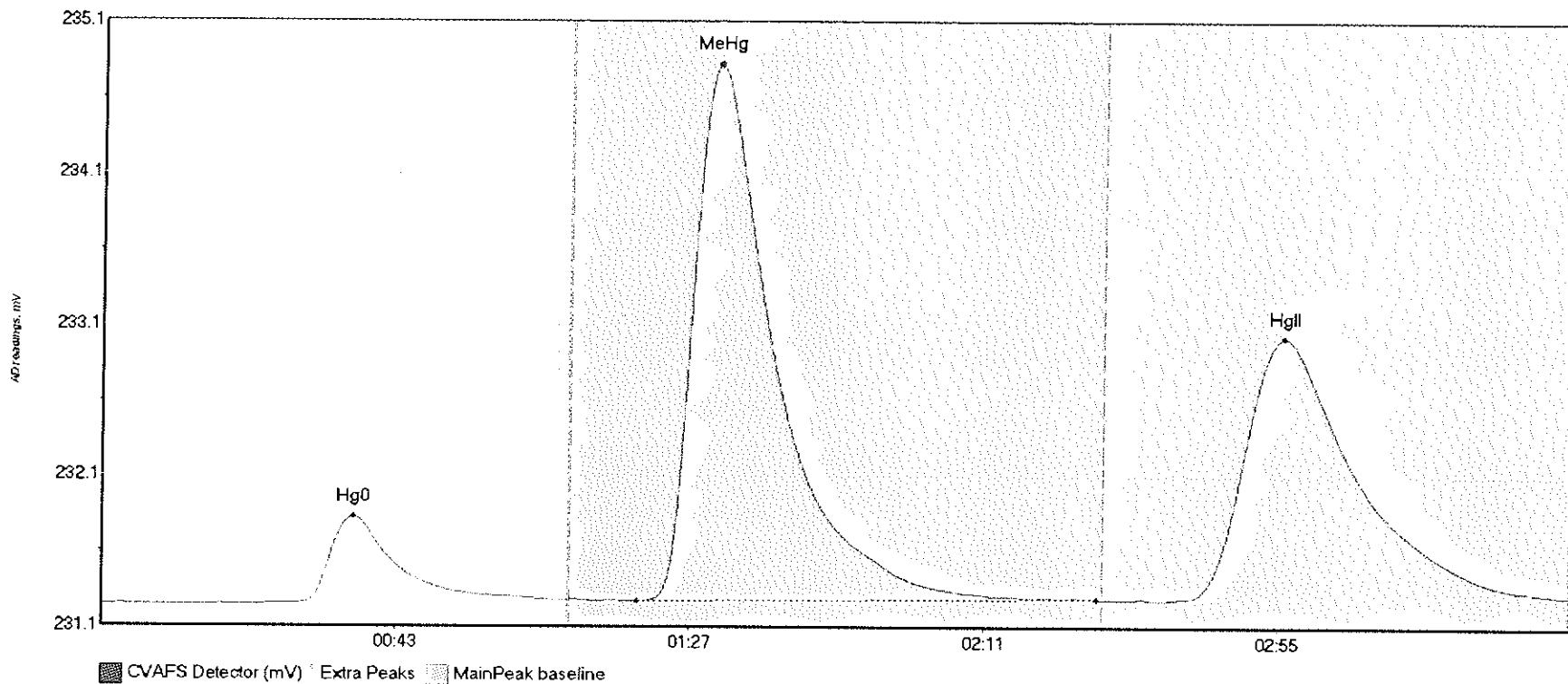
#42: 1611326-03



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-03 Hg0	98.604	26.0	69.9	231.20	231.23	37.4	1.062	CT	231.2008	0.00	0.10	
1611326-03 MeHg	332.542	80.8	143.7	231.23	231.23	92.0	2.446	OK	231.2008	0.00	0.10	
1611326-03 HgII	841.811	158.0	219.8	231.22	231.30	176.5	4.564	CT	231.2008	0.00	0.10	

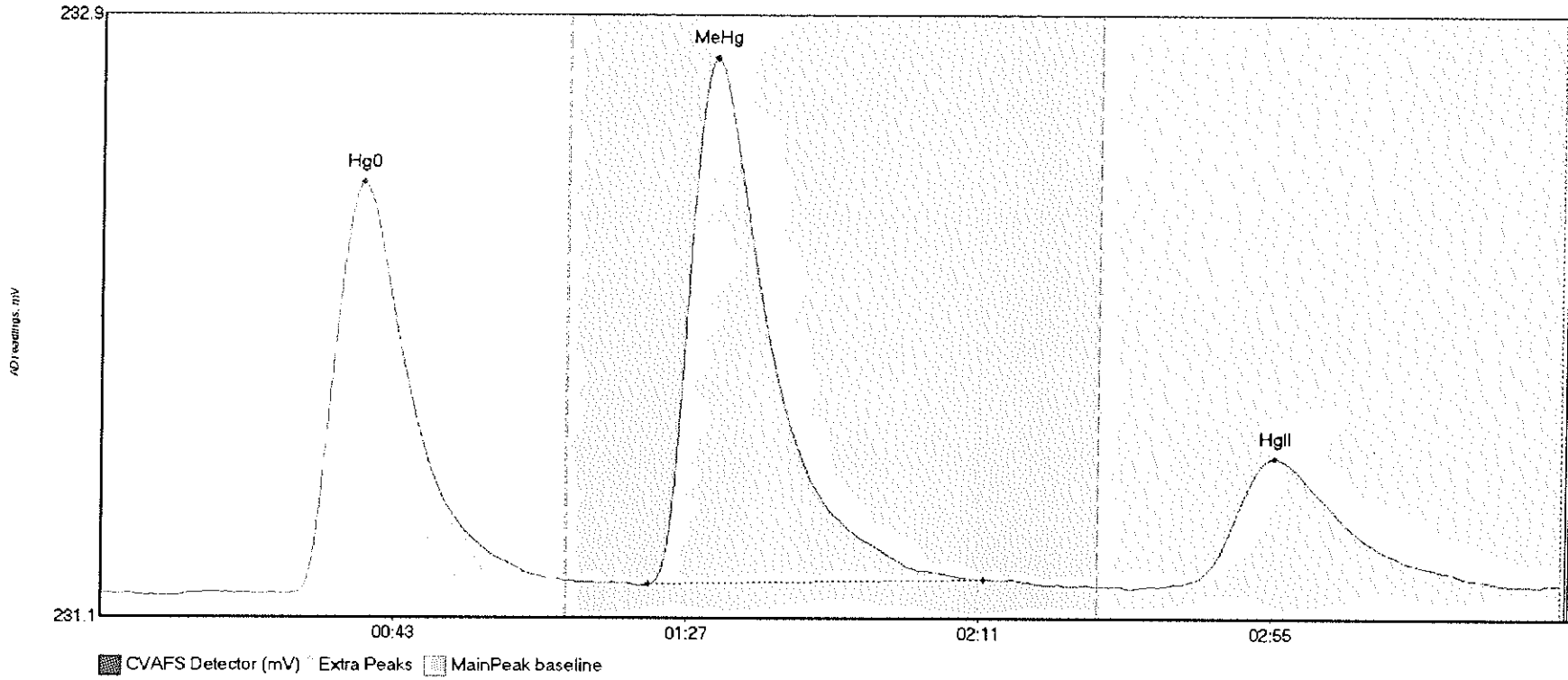


#43: 1611326-04



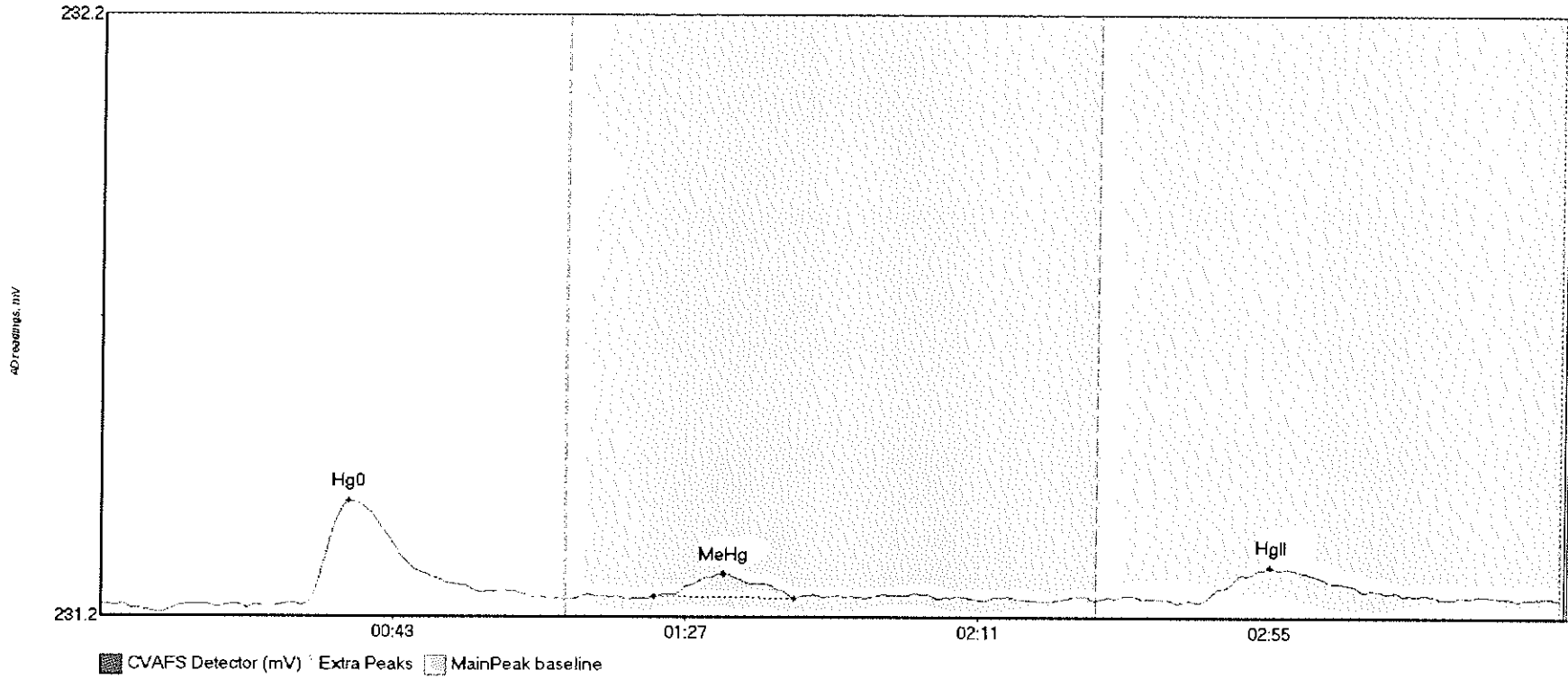
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-04 Hg0	64.160	26.6	68.0	231.20	231.23	37.7	0.580	OK	231.2026	0.00	0.06	
1611326-04 MeHg	504.823	80.2	149.1	231.22	231.24	92.1	3.575	OK	231.2026	0.00	0.06	
1611326-04 HgII	329.935	159.1	219.1	231.23	231.26	176.8	1.753	OK	231.2026	0.00	0.06	

#44: SEQ-CCV3



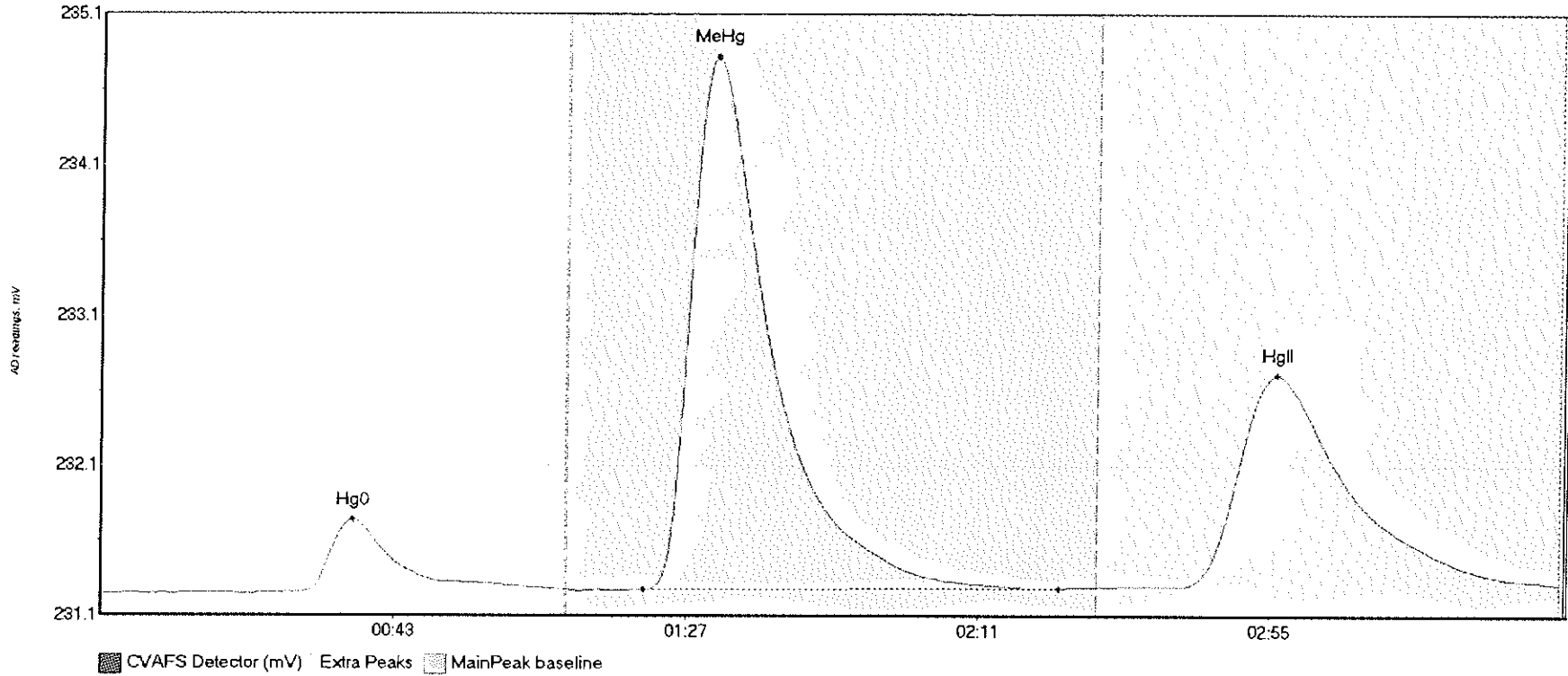
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV3 Hg0	160.319	28.4	69.8	231.22	231.26	39.3	1.228	OK	231.2182	0.00	0.03	
SEQ-CCV3 MeHg	221.580	82.3	132.7	231.25	231.26	92.1	1.572	OK	231.2182	0.00	0.03	
SEQ-CCV3 HgII	71.298	159.2	211.3	231.24	231.25	176.4	0.385	OK	231.2182	0.00	0.03	

#45: SEQ-CCB3



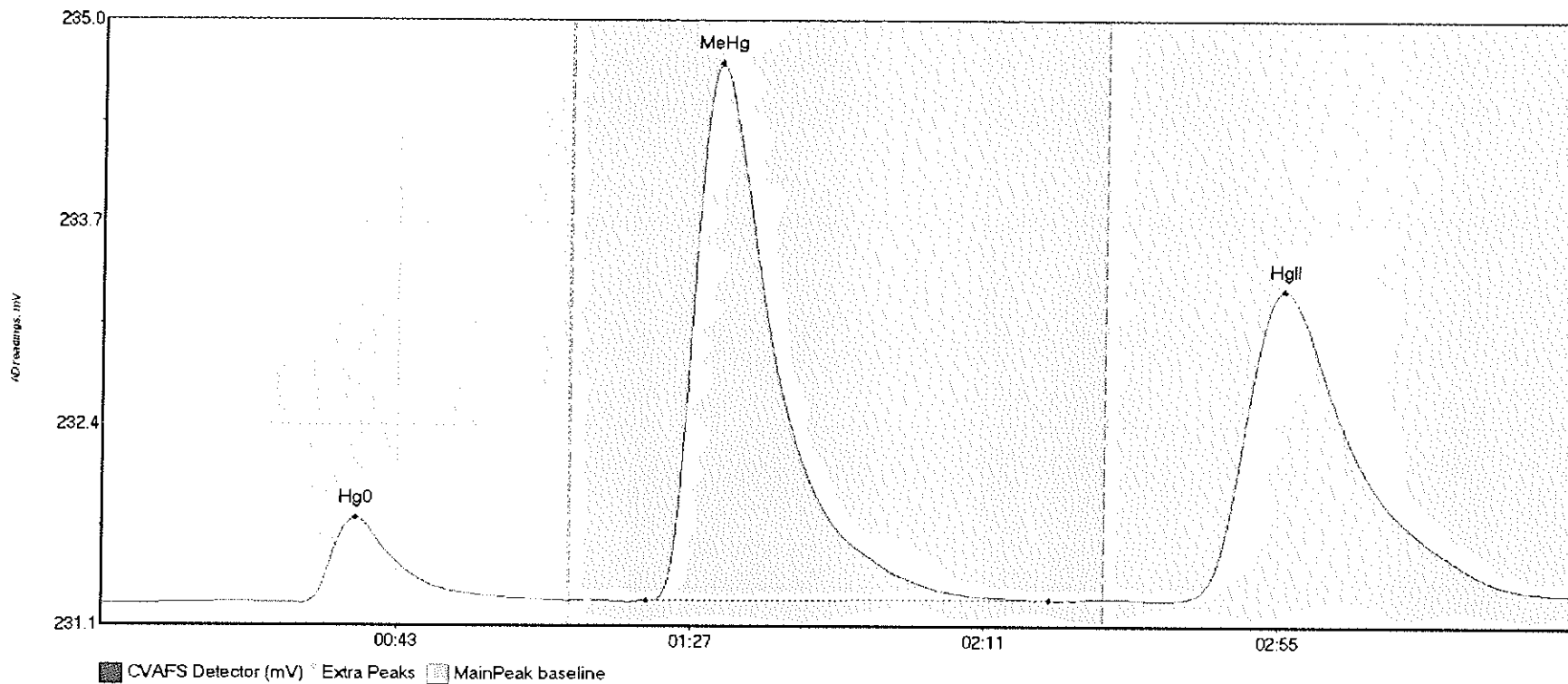
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB3 Hg0	22.680	30.1	69.8	231.21	231.22	37.3	0.173	OK	231.2096	0.00	0.01	
SEQ-CCB3 MeHg	4.352	83.3	104.5	231.22	231.22	93.7	0.038	OK	231.2096	0.00	0.01	
SEQ-CCB3 HgII	9.801	165.3	201.9	231.21	231.22	176.2	0.058	OK	231.2096	0.00	0.01	

#46: 1611326-05



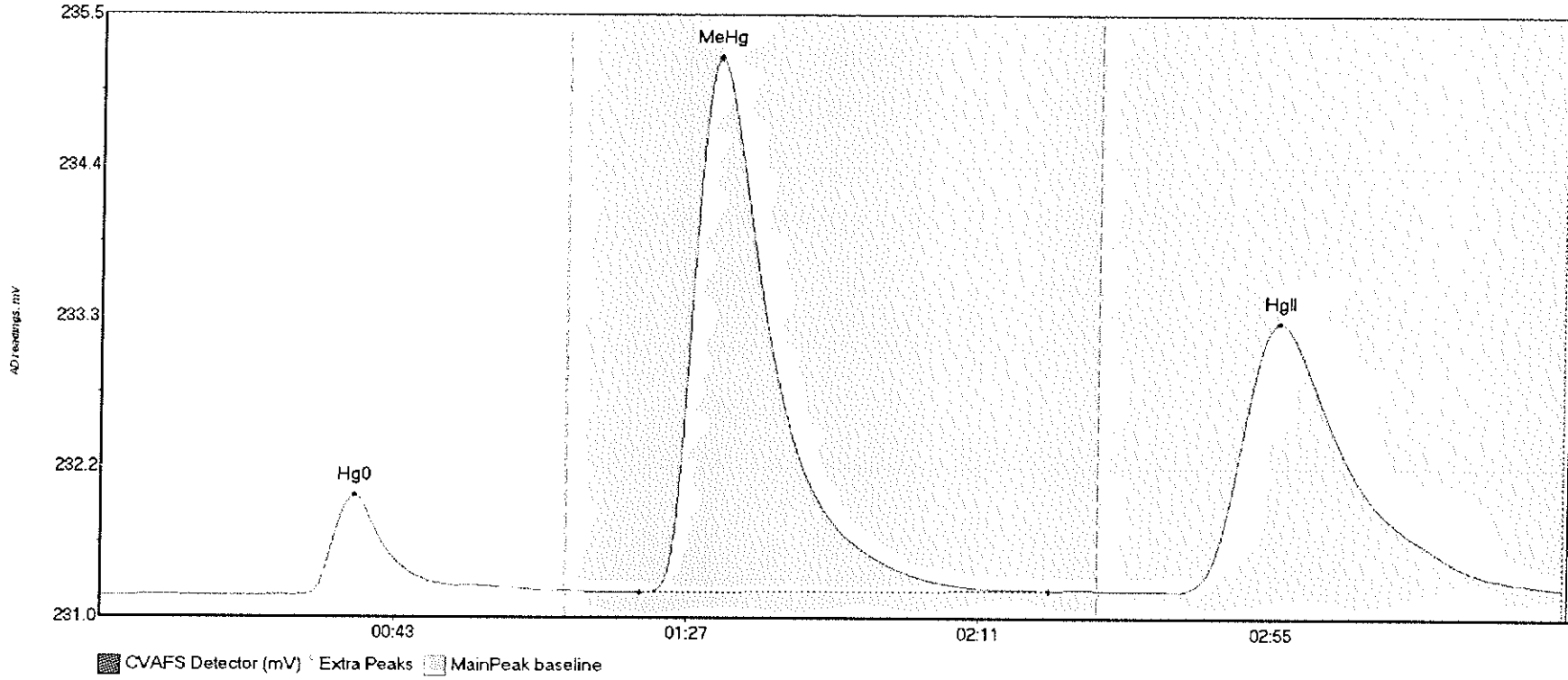
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-05 Hg0	55.422	22.7	69.8	231.20	231.23	37.9	0.496	OK	231.1994	0.00	0.07	
1611326-05 MeHg	503.287	81.6	144.1	231.23	231.24	92.4	3.586	OK	231.1994	0.00	0.07	
1611326-05 HgII	267.588	161.4	219.8	231.25	231.27	177.0	1.426	CT	231.1994	0.00	0.07	

#47: 1611326-06



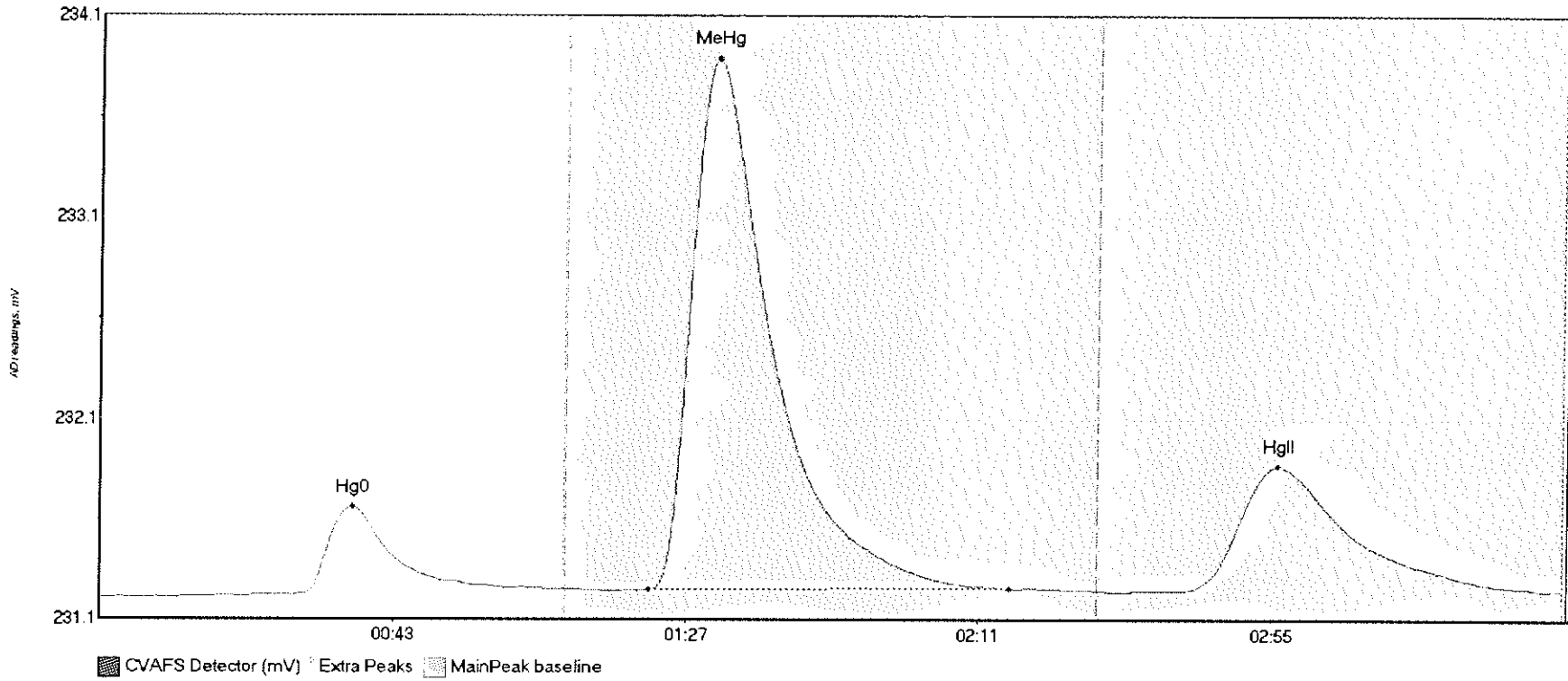
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-06 Hg0	62.614	29.9	69.6	231.21	231.23	37.8	0.548	OK	231.2105	0.00	0.06	
1611326-06 MeHg	486.568	81.5	141.8	231.23	231.24	92.1	3.457	OK	231.2105	0.00	0.06	
1611326-06 HgII	374.448	159.7	219.8	231.23	231.27	176.7	2.000	CT	231.2105	0.00	0.06	

#48: 1611326-07



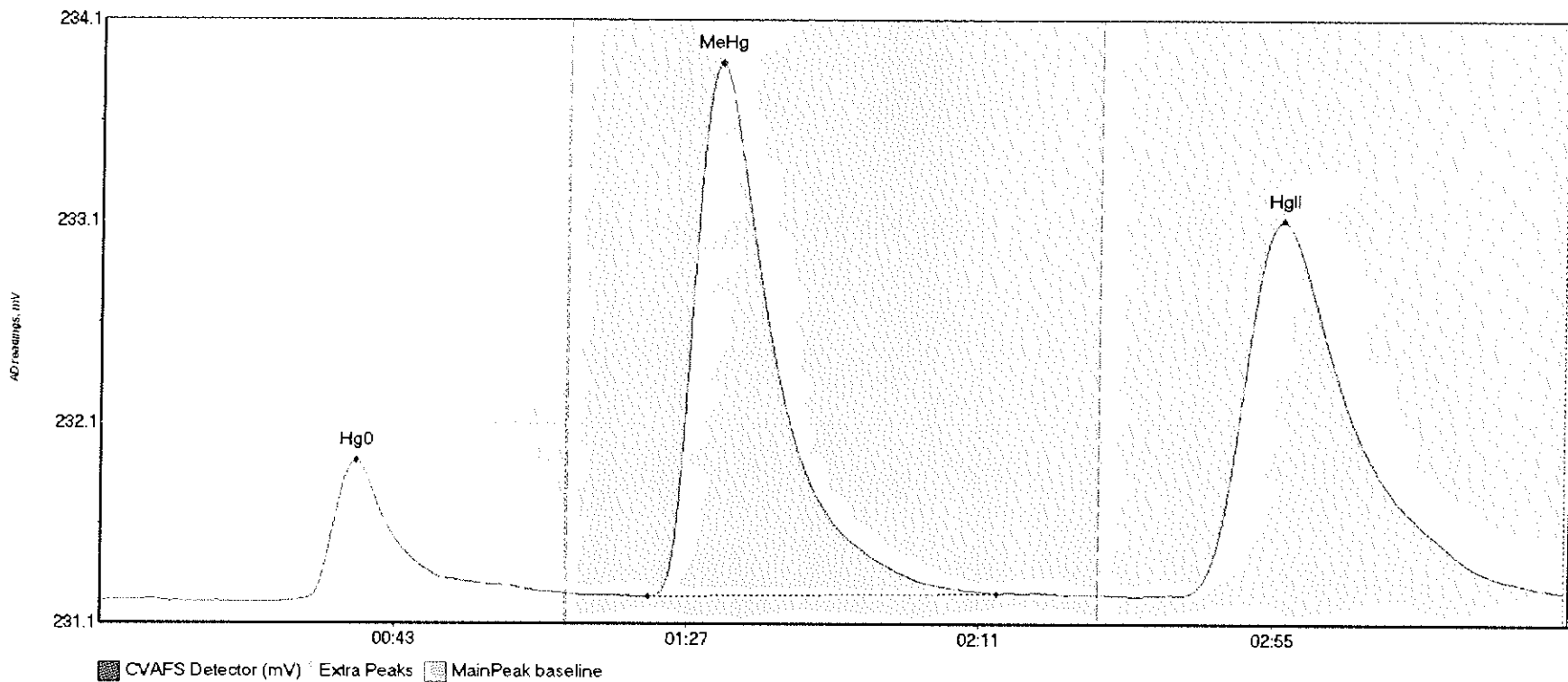
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-07 Hg0	69.779	29.0	67.4	231.21	231.24	38.0	0.734	OK	231.2120	0.00	0.06	
1611326-07 MeHg	538.980	81.0	142.6	231.24	231.25	92.6	3.932	OK	231.2120	0.00	0.06	
1611326-07 HgII	366.931	162.0	219.8	231.24	231.27	177.1	1.986	CT	231.2120	0.00	0.06	

#49: 1611326-08



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611326-08 Hg0	40.522	21.4	67.8	231.22	231.26	37.9	0.445	OK	231.2198	0.00	0.04	
1611326-08 MeHg	367.780	82.4	136.7	231.26	231.26	92.4	2.632	OK	231.2198	0.00	0.04	
1611326-08 HgII	117.823	162.8	217.2	231.25	231.25	176.9	0.619	OK	231.2198	0.00	0.04	

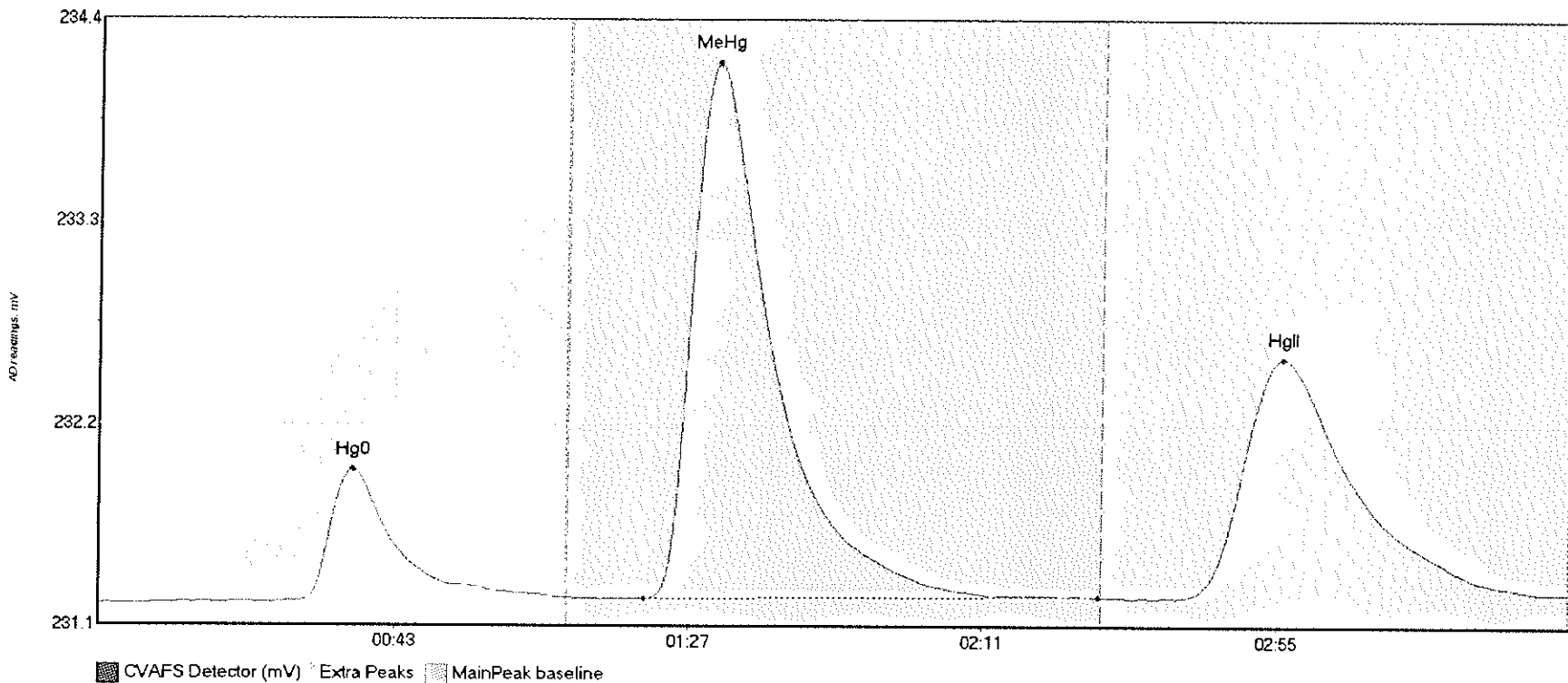
#50: 1611391-01



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611391-01 Hg0	76.075	28.2	69.9	231.22	231.25	38.3	0.706	CT	231.2158	0.00	0.05	
1611391-01 MeHg	373.408	82.3	134.8	231.24	231.25	92.7	2.693	OK	231.2158	0.00	0.05	
1611391-01 HgII	353.706	162.0	219.6	231.24	231.27	177.3	1.892	OK	231.2158	0.00	0.05	

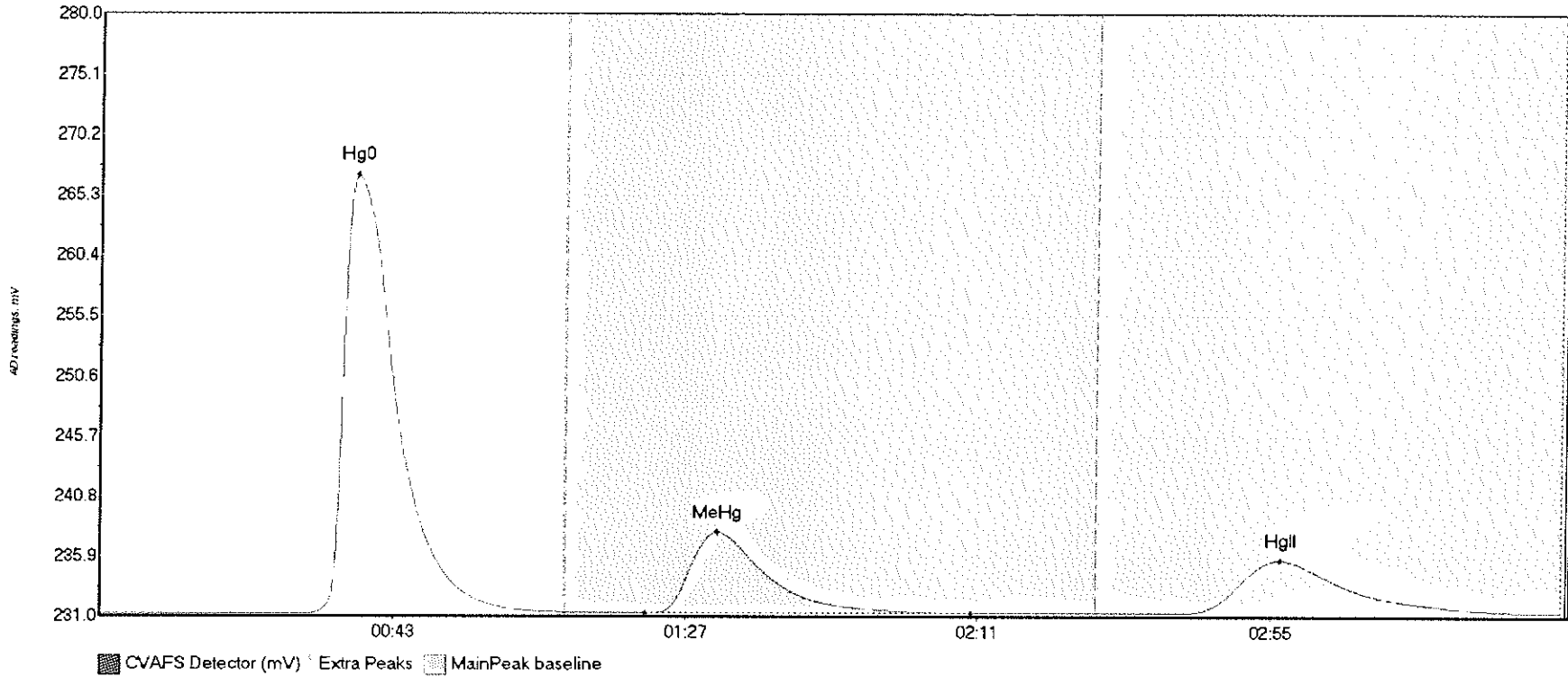


#51: 1611391-02



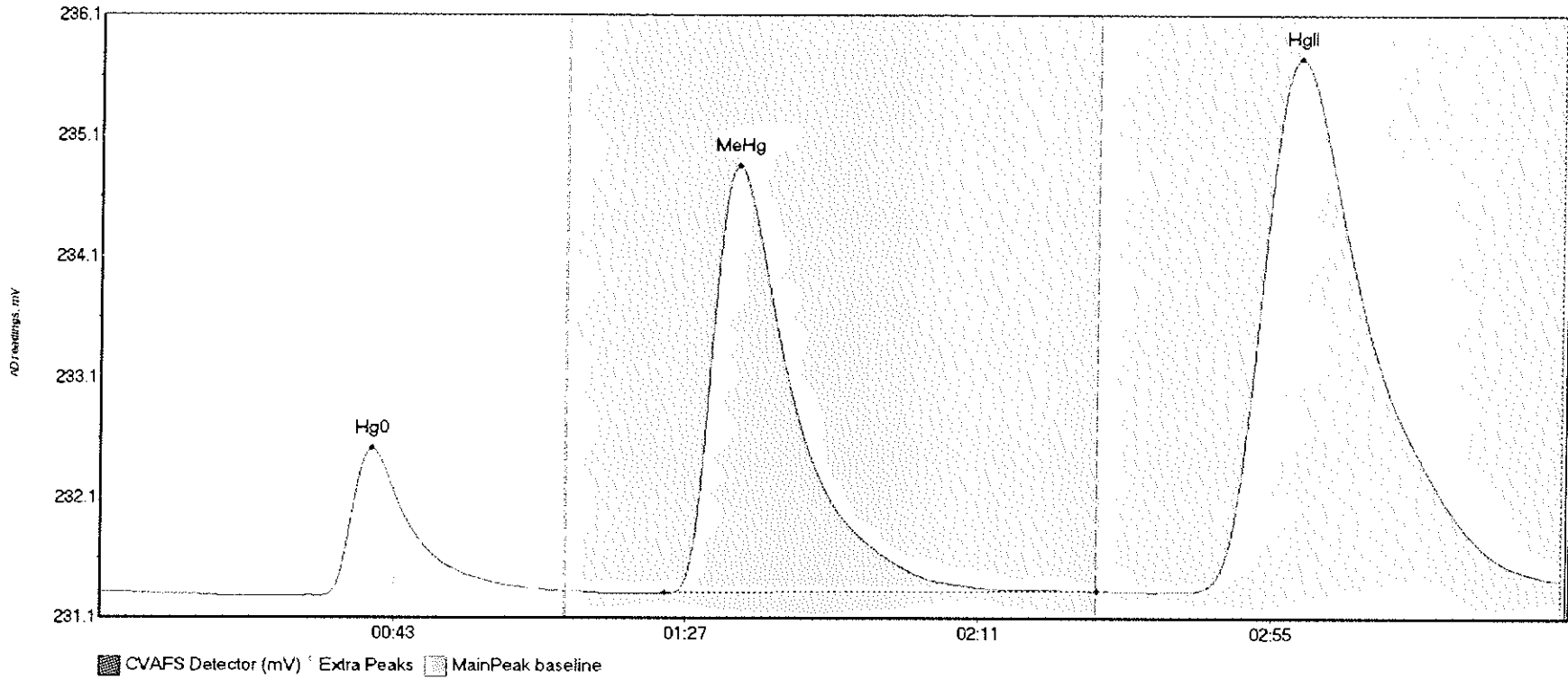
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611391-02 Hg0	79.362	24.9	68.8	231.22	231.25	37.7	0.723	OK	231.2148	0.00	0.06	
1611391-02 MeHg	409.076	81.4	149.4	231.24	231.25	92.1	2.912	OK	231.2148	0.00	0.06	
1611391-02 HgII	243.969	161.0	216.0	231.25	231.27	176.8	1.305	OK	231.2148	0.00	0.06	

#52: 1611391-03



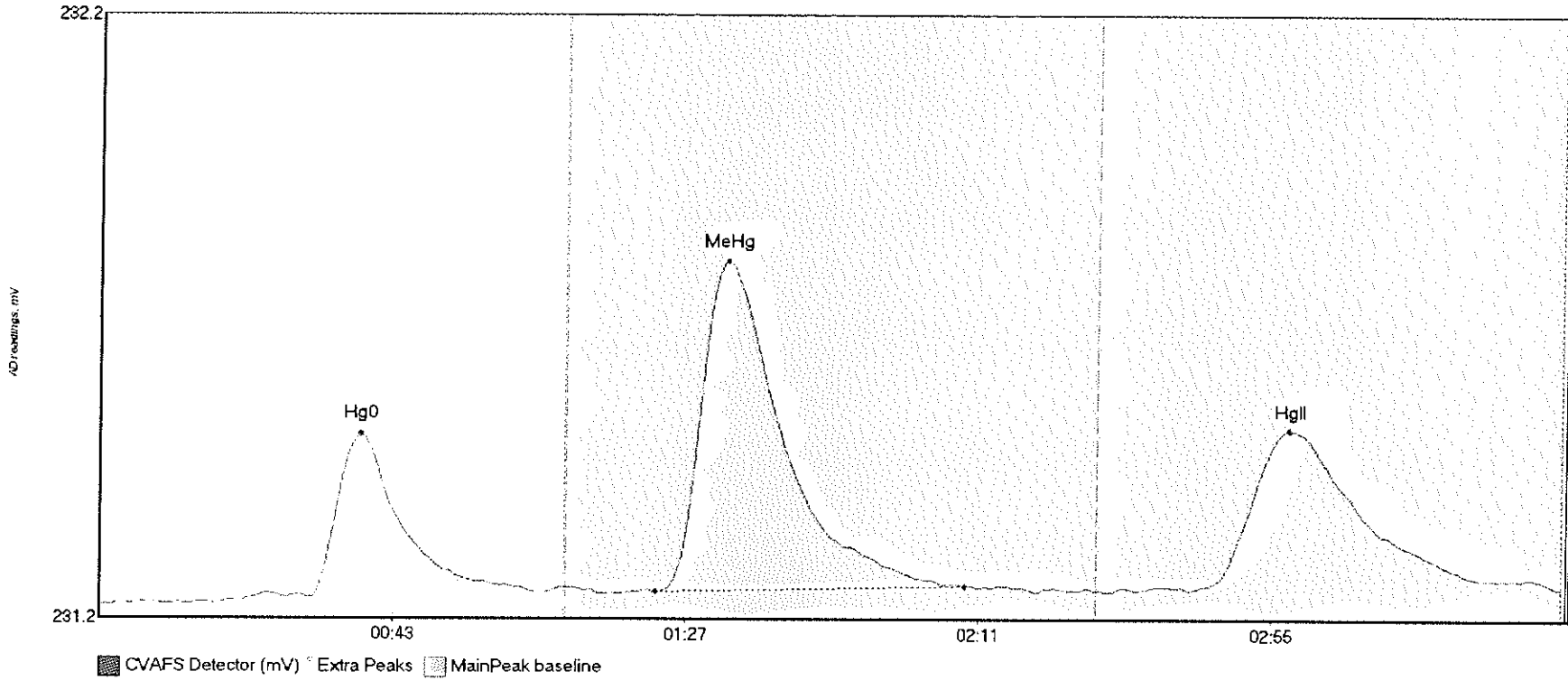
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611391-03 Hg0	3226.915	29.9	69.9	231.24	231.34	38.5	35.629	CT	231.2326	0.00	0.12	
1611391-03 MeHg	860.584	82.0	131.2	231.28	231.31	92.8	6.592	OK	231.2326	0.00	0.12	
1611391-03 HgII	799.910	159.9	219.8	231.28	231.35	177.4	4.325	CT	231.2326	0.00	0.12	

#53: 1611391-04



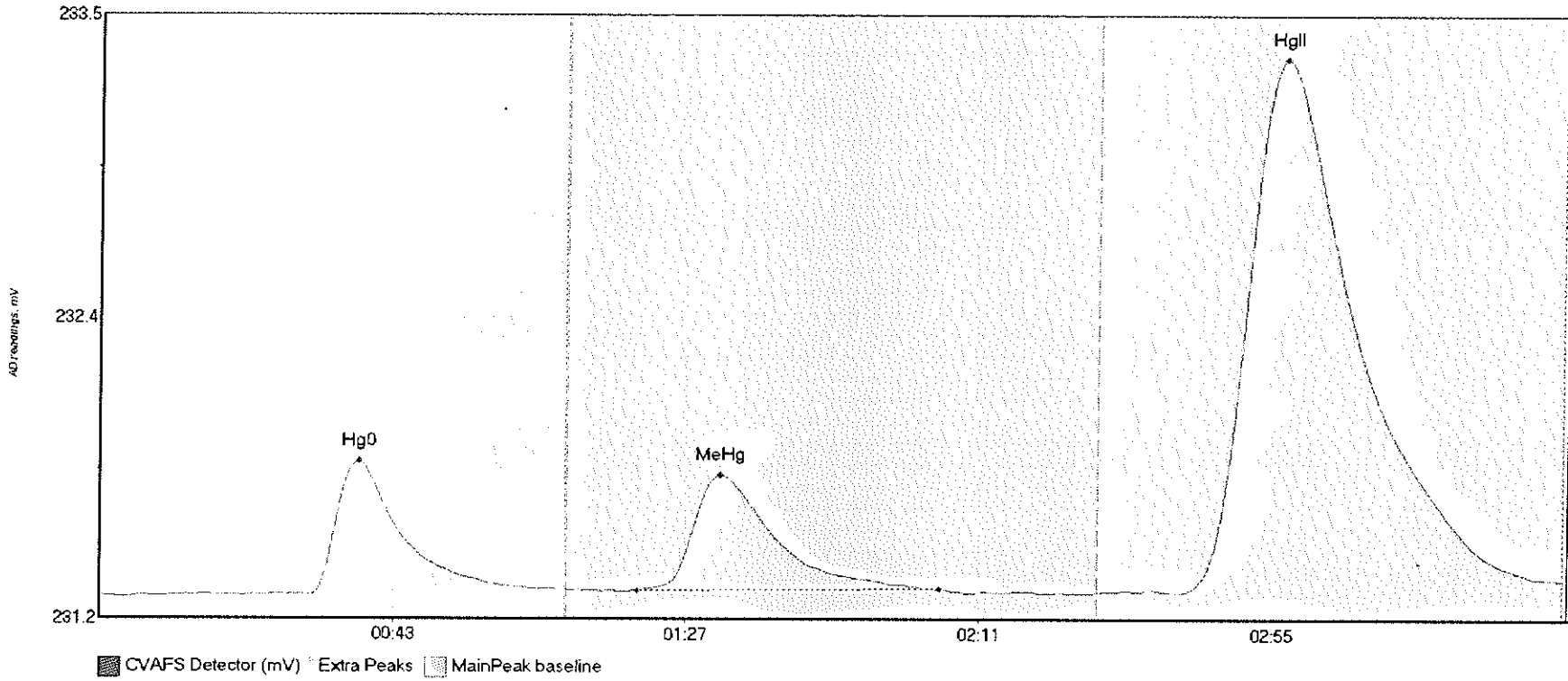
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611391-04 Hg0	128.177	32.9	69.9	231.26	231.30	40.7	1.233	CT	231.2911	0.00	0.10	
1611391-04 MeHg	504.070	84.9	150.0	231.28	231.30	95.7	3.573	CT	231.2911	0.00	0.10	
1611391-04 HgII	829.420	163.8	219.6	231.29	231.39	180.0	4.453	OK	231.2911	0.00	0.10	

#54: 1611392-01



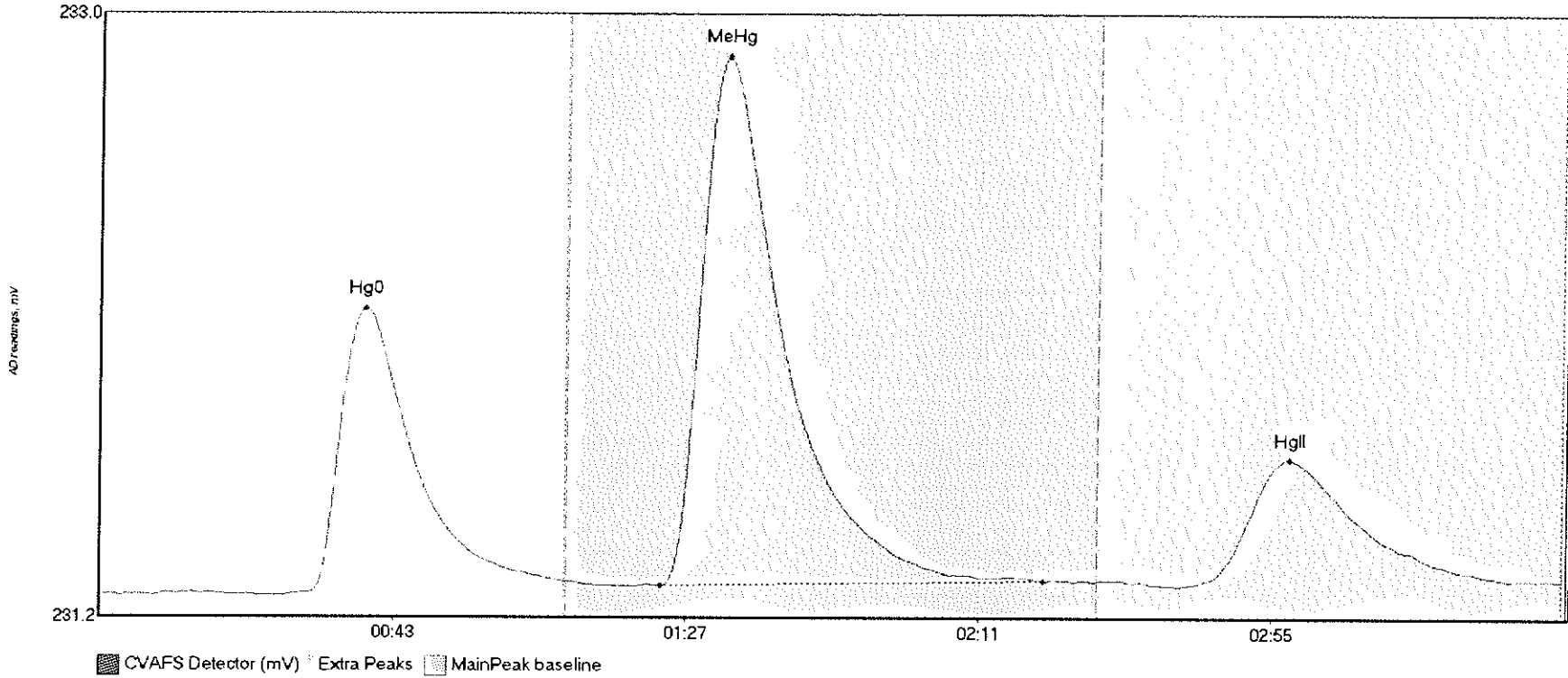
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611392-01 Hg0	30.743	18.1	65.7	231.25	231.27	39.2	0.279	OK	231.2479	0.00	0.03	
1611392-01 MeHg	76.108	83.6	130.0	231.27	231.28	94.2	0.550	OK	231.2479	0.00	0.03	
1611392-01 HgII	50.509	164.1	219.5	231.27	231.28	178.6	0.267	OK	231.2479	0.00	0.03	

#55: 1611392-02



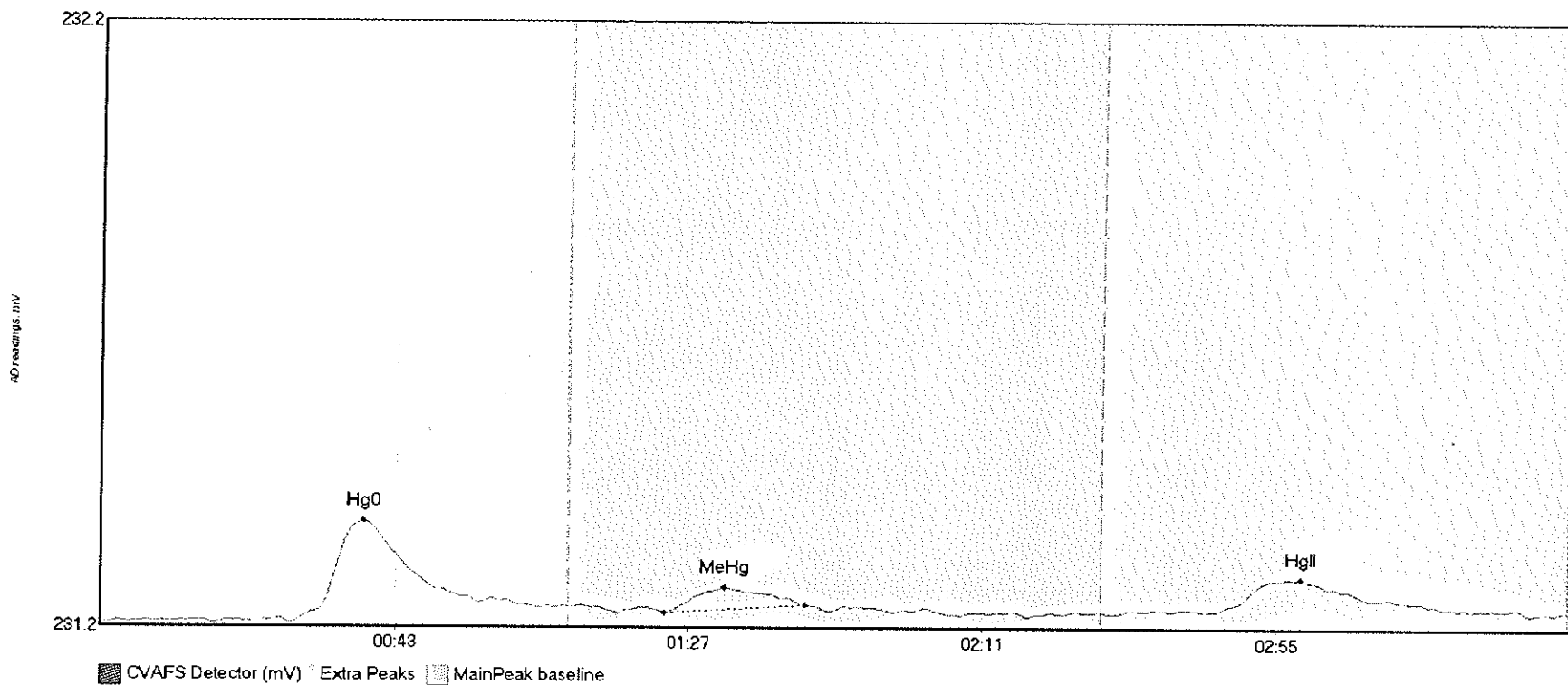
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
1611392-02 Hg0	58.361	31.5	69.9	231.25	231.27	38.8	0.530	CT	231.2473	0.00	0.06	
1611392-02 MeHg	63.235	80.7	126.0	231.27	231.27	93.2	0.457	OK	231.2473	0.00	0.06	
1611392-02 HgII	395.552	162.1	219.8	231.26	231.31	177.8	2.117	CT	231.2473	0.00	0.06	

#56: SEQ-CCV4



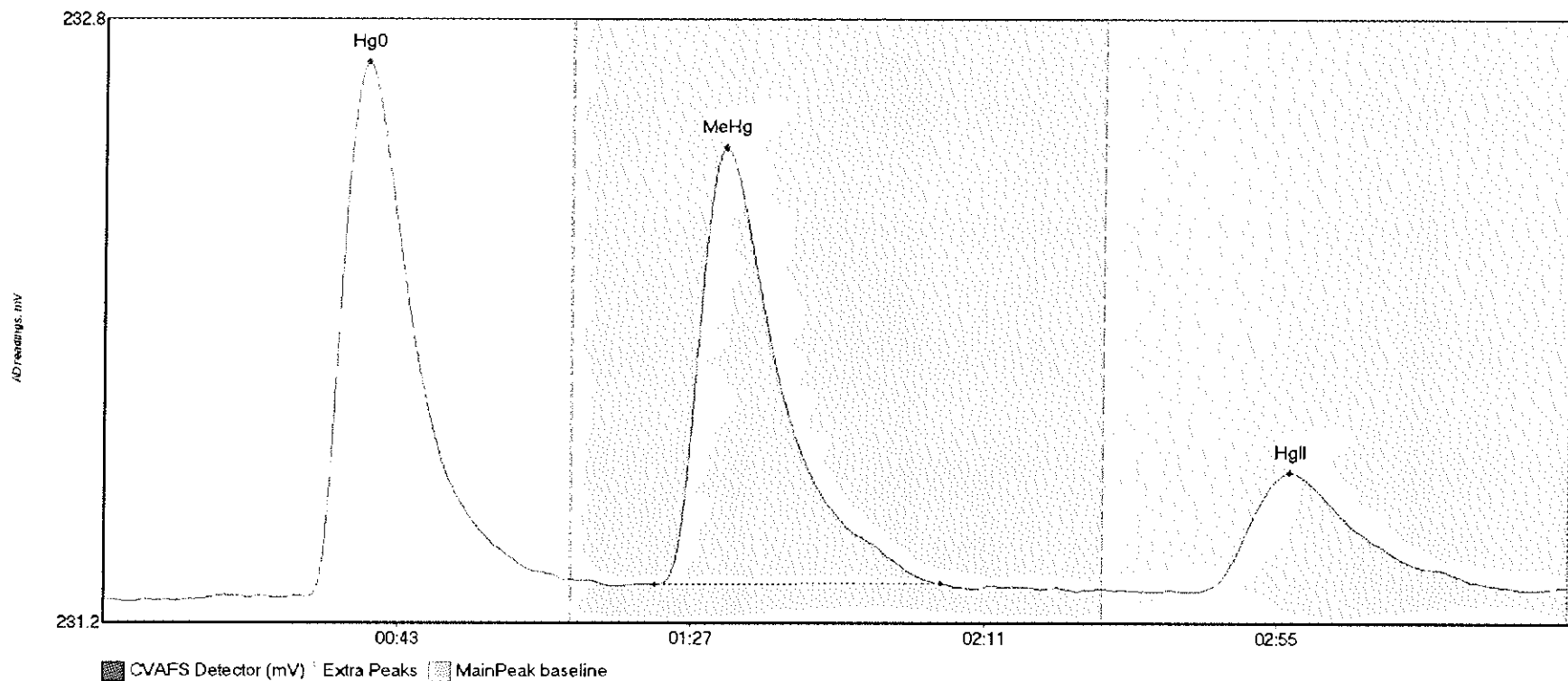
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV4 Hg0	105.891	29.8	69.8	231.24	231.28	39.7	0.864	OK	231.2366	0.00	0.04	
SEQ-CCV4 MeHg	228.961	84.3	141.7	231.26	231.28	94.1	1.601	OK	231.2366	0.00	0.04	
SEQ-CCV4 HgII	70.267	162.1	211.8	231.26	231.28	178.6	0.386	OK	231.2366	0.00	0.04	

#57: SEQ-CCB4



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BiDev	BiShift	Comment
SEQ-CCB4 Hg0	20.524	28.8	65.7	231.24	231.27	39.3	0.167	OK	231.2419	0.00	0.02	
SEQ-CCB4 MeHg	4.258	84.4	105.5	231.26	231.27	93.5	0.040	OK	231.2419	0.00	0.02	
SEQ-CCB4 HgII	11.207	167.1	214.3	231.26	231.26	179.6	0.054	OK	231.2419	0.00	0.02	

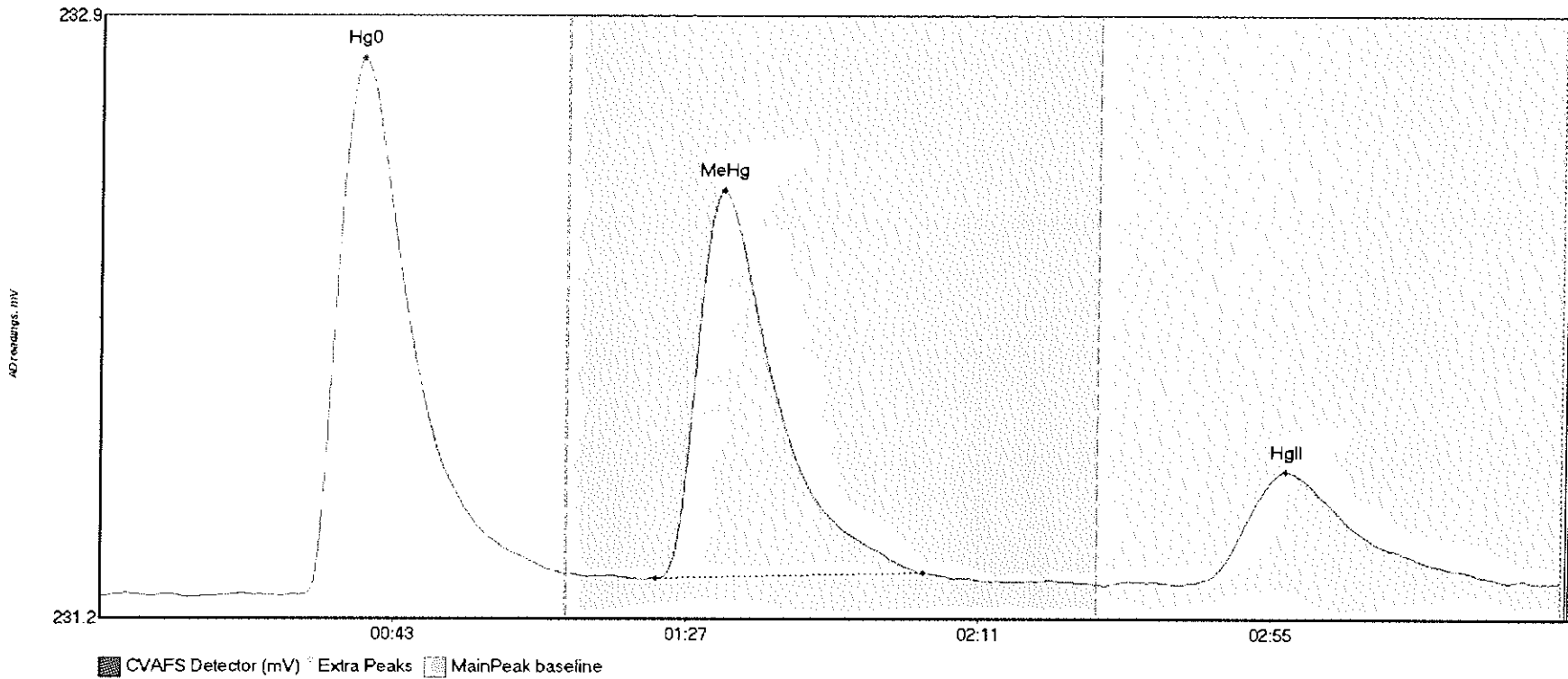
#58: SEQ-CCV5



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV5 Hg0	173.667	14.7	69.1	231.24	231.29	39.3	1.417	OK	231.2415	0.00	0.03	
SEQ-CCV5 MeHg	161.575	82.6	125.4	231.28	231.28	93.0	1.156	OK	231.2415	0.00	0.03	
SEQ-CCV5 HgII	59.307	164.3	212.8	231.26	231.27	177.9	0.316	OK	231.2415	0.00	0.03	

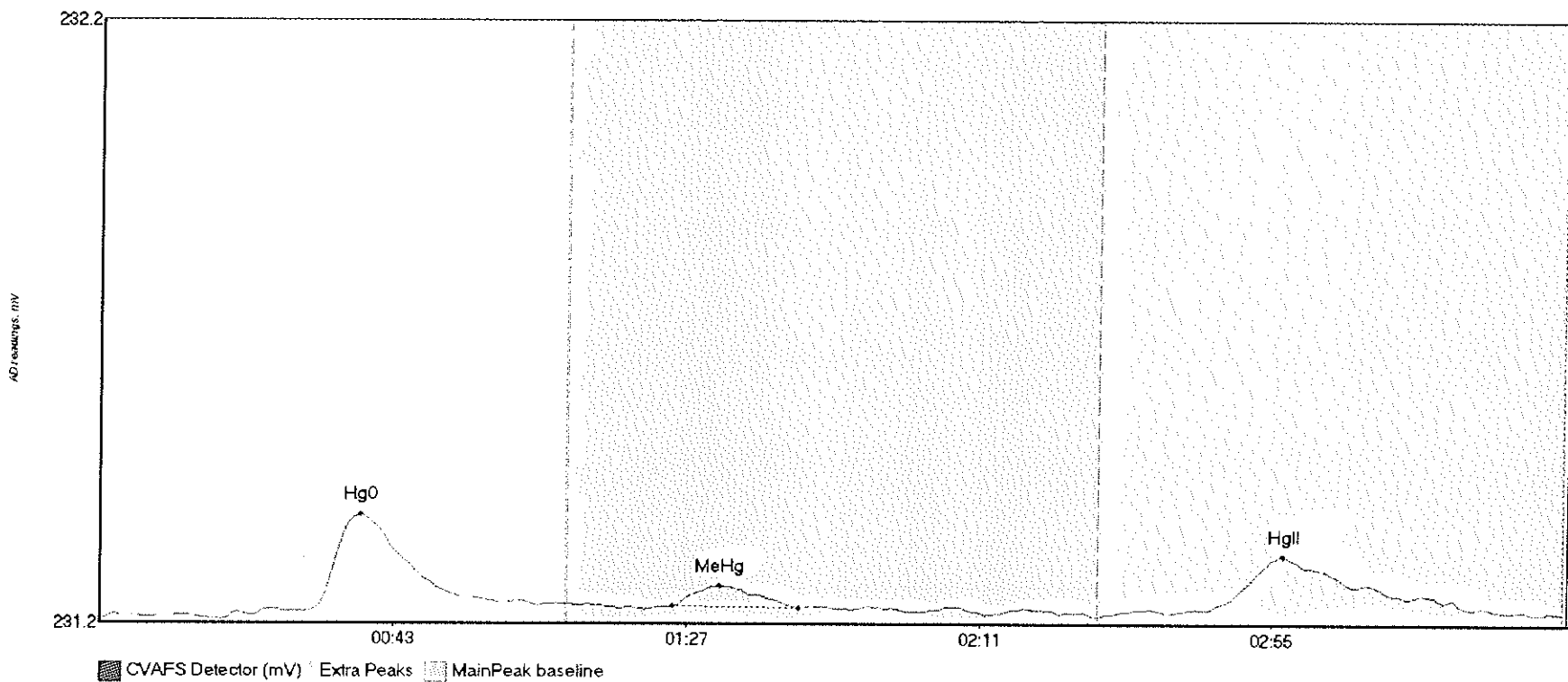


#59: SEQ-CCV6



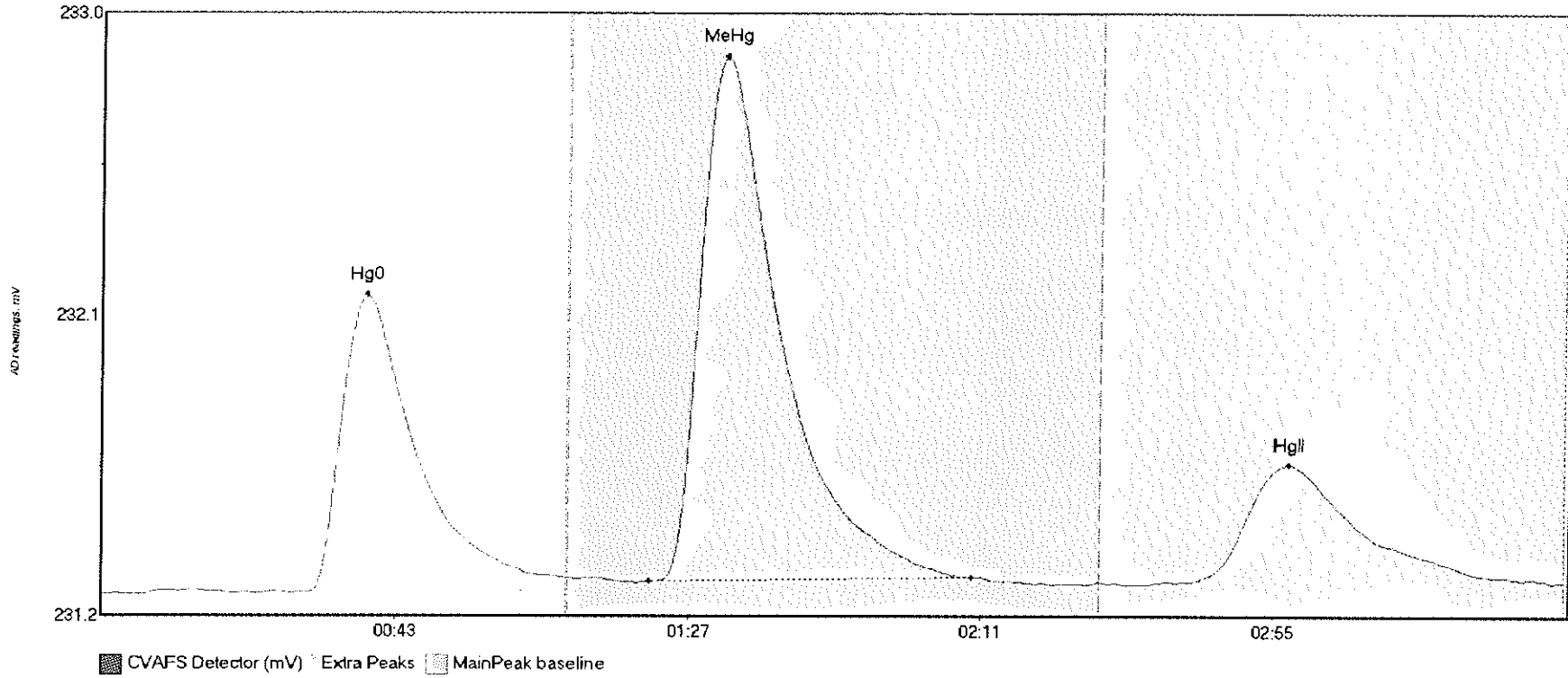
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV6 Hg0	198.684	30.0	69.9	231.25	231.31	39.3	1.573	CT	231.2449	0.00	0.04	
SEQ-CCV6 MeHg	154.813	83.4	123.8	231.30	231.31	93.5	1.138	OK	231.2449	0.00	0.04	
SEQ-CCV6 HgII	62.889	162.7	216.6	231.28	231.28	178.2	0.334	OK	231.2449	0.00	0.04	

#60: SEQ-CCB5



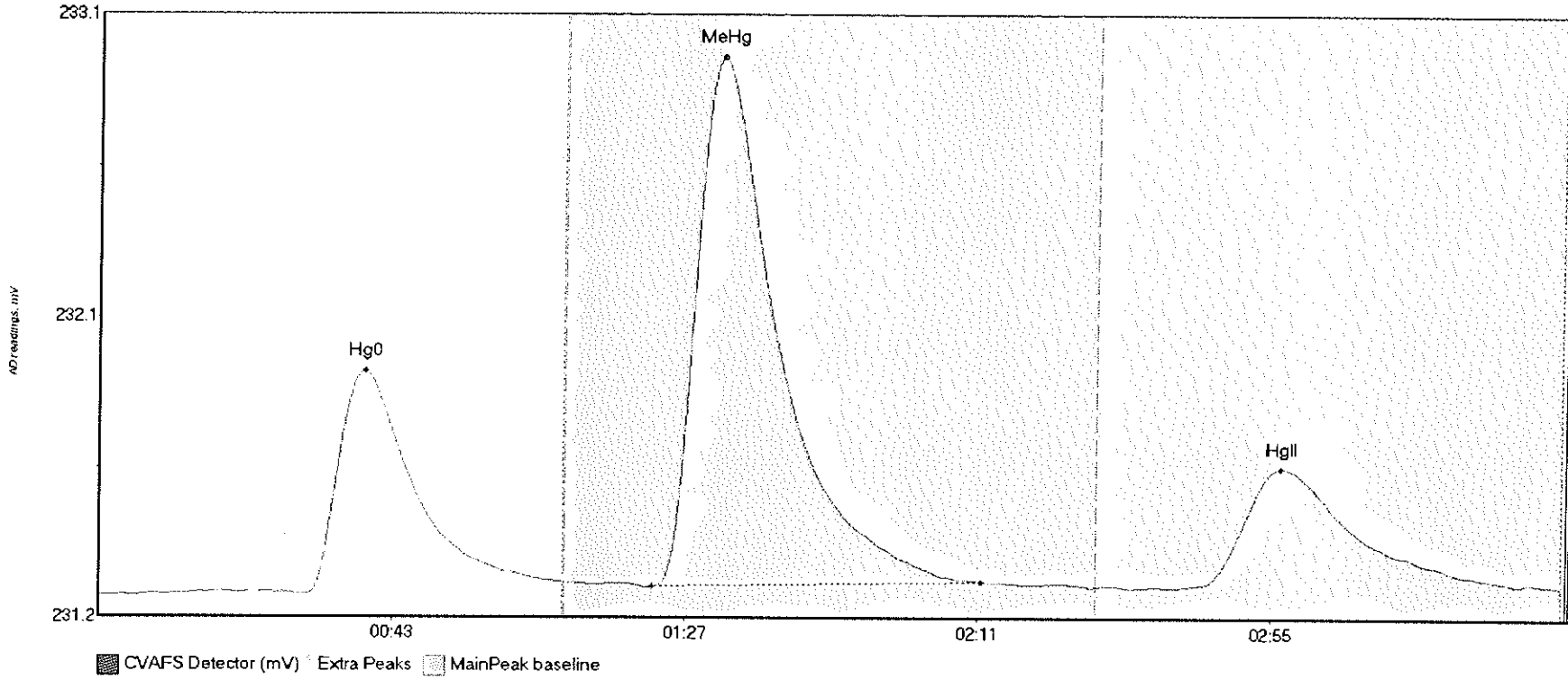
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB5 Hg0	21.509	18.1	65.6	231.24	231.26	39.2	0.174	OK	231.2399	0.00	0.01	
SEQ-CCB5 MeHg	3.681	85.9	104.9	231.26	231.26	93.0	0.033	OK	231.2399	0.00	0.01	
SEQ-CCB5 HgII	18.743	161.3	215.4	231.25	231.25	177.7	0.095	OK	231.2399	0.00	0.01	

#61: SEQ-CCV7



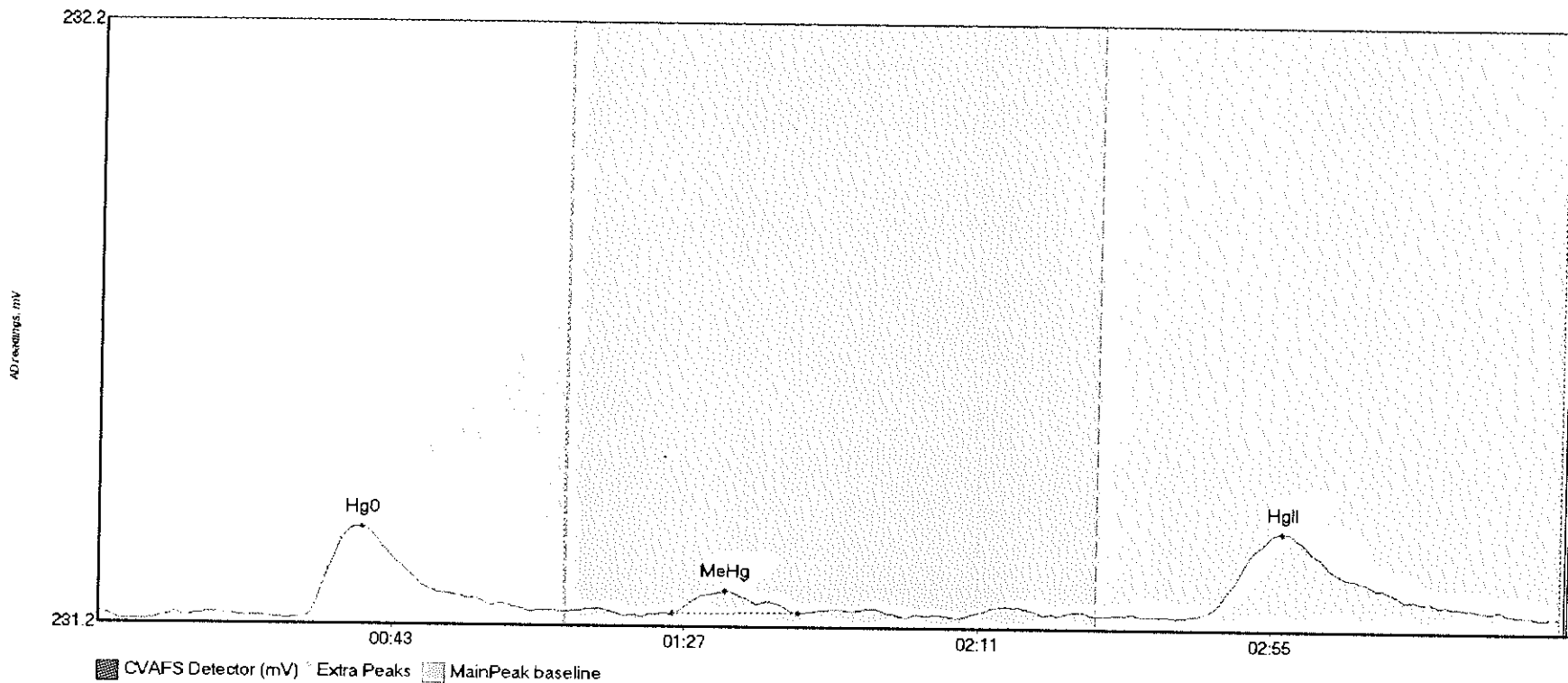
Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV7 Hg0	114.560	23.1	69.8	231.23	231.28	39.6	0.927	OK	231.2302	0.00	0.04	
SEQ-CCV7 MeHg	228.132	82.1	130.7	231.27	231.28	93.5	1.630	OK	231.2302	0.00	0.04	
SEQ-CCV7 HgII	70.747	163.1	218.2	231.27	231.27	178.3	0.367	OK	231.2302	0.00	0.04	

#62: SEQ-CCV8



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCV8 Hg0	89.695	7.0	69.9	231.24	231.28	39.8	0.726	CT	231.2389	0.00	0.03	
SEQ-CCV8 MeHg	243.799	83.2	132.6	231.27	231.29	93.3	1.717	OK	231.2389	0.00	0.03	
SEQ-CCV8 HgII	70.785	164.5	213.3	231.27	231.28	177.4	0.383	OK	231.2389	0.00	0.03	

#63: SEQ-CCB6



Name	Area	Start Time	EndTime	StartValue	EndValue	Peak Max	PeakHeight	Flags	Baseline	BlDev	BlShift	Comment
SEQ-CCB6 Hg0	20.327	30.6	69.1	231.24	231.25	39.6	0.150	OK	231.2453	0.00	0.01	
SEQ-CCB6 MeHg	3.979	86.2	105.2	231.25	231.25	94.1	0.038	OK	231.2453	0.00	0.01	
SEQ-CCB6 HgII	25.021	165.1	213.6	231.25	231.25	177.8	0.138	OK	231.2453	0.00	0.01	

**Peer Review Check List for MHg for CV-GC-AFS (FGS-070) 2015 Rev 5 (08/06/2015)**

<b>Analyst:</b> DON MORAN	<b>Sequence #:</b> 6L08027
<b>Reviewer:</b> _____	<b>Dataset ID #:</b> MMHG27001-161207-2
<b>Date:</b> 12/8/16	<b>WO #:</b> _____
<b>Batch #(s):</b> F612292, F612322	<b>Client(s):</b> _____

• Select the correct preparation method.

Additio

Analyte	Prep Method	Matrix
<input type="checkbox"/> MHg	SOP2797 MHg Distillation	Water
<input type="checkbox"/> MHg	SOP2986 KOH/MeOH Digest	Tissue
<input checked="" type="checkbox"/> MHg	SOP5134 MeCl Extraction	Sed/Soil
<input type="checkbox"/> DMHg	SOP2816 (None Accredited method)	ALL

**Analyst Initials:**

**Reviewer Initials:**

- |  |     |  |  |  |
|--|-----|--|--|--|
|  | D M |  |  |  |
|--|-----|--|--|--|
1. Compare Sample ID with Bench sheet/Sequence/Raw Data (Have all samples been imported?)  YES  NO
  2. Check for transcription errors from Excel spreadsheet (or Prep Bench sheet)/Raw data  YES  NO 
    - (a) Reviewer: 100% of peak heights checked  YES  NO
    - (b) Are there peak height errors?  YES  NO
    - (c) Error on a sample: Do peak heights, responses, & initial results match corrected data?  YES  NO  N/A
    - (d) Error on a Cal Pt, ICB/CCB, or PB: Has the data been reimported?  YES  NO  N/A
    - (e) Check standards & reagents in sequence & bench sheet for correct usage (i.e. expiries).  YES  NO  N/A
    - (f) Check and compare masses (review prep bench sheet)  YES  NO  N/A
    - (g) Check and compare initial and final volumes  YES  NO  N/A
    - (h) Do aliquots and dilutions written on benchsheet match those in Excel?  YES  NO  N/A
    - (i) Is the pH>3.0 for all distilled samples?  YES  NO  N/A
    - (j) Is the sequence #, analyst, date, and instrument # on the QC page?  YES  NO
    - (k) Is the analysis status correct? (analyzed/initial review/reviewed)  YES  NO
    - (l) Original prep bench sheet added to data package?  YES  NO
    - (m) Benchsheet prep date MUST match actual prep date (check if re-shot vs re-extract)  YES  NO
  3. High QA? WO#(s)/Client(s): \_\_\_\_\_  YES  NO
  4. Client specific QC? (if Yes, refer to Project Notes/LIMS)  YES  NO 
    - (a) Have the QC requirements been met for all WO#s?  YES  NO
  5. 20 or fewer samples in batch? \_\_\_\_\_  YES  NO 
    - (a) 3 PBs, 1 LCS/LCSD (or BS/BSD), 2 MS/MSD/MD per batch?  YES  NO
    - (b) 1 CCV and 1 CCB every 10 analytical runs?  YES  NO
- QA/QC Data Checked**
6. The calibration curve included a minimum of 5 Standards  PASS  FAIL  N/A   
Comments: \_\_\_\_\_
  7. 1st Calibration Standard % Recoveries (65-135%)  PASS  FAIL  N/A   
Comments: \_\_\_\_\_
  8. RSD CF ( $\leq 15\%$ )  PASS  FAIL   
Comments: \_\_\_\_\_

**Peer Review Check List for MHg for CV-GC-AFS (FGS-070) 2013 Rev 4 (08/22/2013)**

<b>Analyst:</b> DON MORAN	<b>Sequence #:</b> 6L08027
<b>Reviewer:</b> 0	<b>Dataset ID #:</b> MMHG27001-161207-2
<b>Date:</b> 12/8/2016	<b>WO #:</b> [REDACTED]
<b>Batch #(s):</b> F612292, F612322	<b>Client(s):</b> [REDACTED]

Reviewer Initials: \_\_\_\_\_

- |  |  |  |   |
|--|--|--|---|
| 9. ICV % Recoveries 67-133%  | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 10. CCV % Recoveries 67-133%   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 11. Are the absolute value of the ICB and CCBs < PQL?  | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 12. LCS/LCSD/CRM/BS/BSD % Recoveries (70-130%)   | <input checked="" type="checkbox"/> PASS | <input checked="" type="checkbox"/> FAIL | <input type="checkbox"/>                |
| Comments: <b>F612322-BS1 FAILED. LOW RECOVERY</b>  |  |  |   |
| 13. LCS/LCSD or BS/BSD RPD (< 25%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 14. Water: Average of Preparation Blanks < 0.045 ng/L and standard deviation of 0.015 ng/L?  | <input type="checkbox"/> PASS            | <input type="checkbox"/> FAIL            | <input checked="" type="checkbox"/> N/A |
| Comments: _____  |  |  |   |
| 15. Sediment/Tissue: Individually, are the Preparation Blanks < PQL for the matrix?          | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/> N/A            |
| Comments: _____  | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| 16. Have Total Solids been applied? (If NO, please ensure that they are done or nearly done) | <input type="checkbox"/> YES             | <input type="checkbox"/> NO              | <input checked="" type="checkbox"/> N/A |
| 17. Is the correct 'Source' designated for MD/MS/MSD?  | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO              | <input type="checkbox"/>                |
| 18. For digested preps: was there a spike witness signature & date on the prep bench sheet?  | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO              | <input type="checkbox"/> N/A            |
| 19. MD RPD/MT RSD(< 35%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 20. Is there one set of MS/MSD per every 10 samples?   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 21. MS/MSD RPD(< 35%)  | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 22. MS (AS) % Recoveries (65-130%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 23. MSD (ASD) % Recoveries (65-130%)   | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL            | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 24. Spiked 1-5X ambient or 1-5X PQL (whichever is higher) (from EPA 1630)                    | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO              | <input type="checkbox"/>                |
| 25. Are all samples within instrument calibration range (or at maximum aliquot size)?        | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO              | <input type="checkbox"/>                |
| Comments: _____  |  |  |   |
| 26. For instrumental dilutions, is the dilution factor in excel correct?                     | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> NO              | <input type="checkbox"/> N/A            |
| Is the sample volume, diluents, and final volume of the dilution noted on benchsheet?        | <input type="checkbox"/> PASS            | <input checked="" type="checkbox"/> NO   | <input type="checkbox"/> N/A            |
| 27. Dissolved < Total metals (if applicable)   | <input type="checkbox"/> PASS            | <input type="checkbox"/> NO              | <input checked="" type="checkbox"/> N/A |
| Comments: _____  |  |  |   |
| 28. Effluent < Influent metals (visually confirm if needed)                                  | <input type="checkbox"/> PASS            | <input type="checkbox"/> NO              | <input checked="" type="checkbox"/> N/A |
| Comments: _____  |  |  |   |

**Peer Review Check List for MHg for CV-GC-AFS (FGS-070) 2013 Rev 4 (08/22/2013)**

<b>Analyst:</b> DON MORAN	<b>Sequence #:</b> 6L08027
<b>Reviewer:</b> 0	<b>Dataset ID #:</b> MMHG27001-161207-2
<b>Date:</b> 12/8/2016	<b>WO #:</b> [REDACTED]
<b>Batch #(s):</b> F612292, F612322	<b>Client(s):</b> [REDACTED]

**Analyst Initials:** DM  
**Reviewer Initials:**

29. Are re-runs noted with reason?  
 Comments: \_\_\_\_\_  
 YES     NO     N/A
30. For failing QC (CCV, CCB, PB, BS/BSD, CAL):  
 Was a bubbler and trap test run before the analytical run continued?  
 Comments: \_\_\_\_\_  
 YES     NO     N/A
31. Do re-run results compare to initial analysis (< 35% RPD)?  
 Comments: \_\_\_\_\_  
 YES     NO     N/A
32. Are qualifiers consistent with the data review flowcharts?  
 Comments: QM-12  
 YES     NO     N/A
33. Have non-reportable samples been imported into LIMS and clicked to non-reportable?  
 Comments: \_\_\_\_\_  
 YES     NO     N/A
34. Have re-extracts been created for non-reportable samples?  
 YES     NO     N/A
35. Narrations in MMO box in LIMS?  
 Comments: \_\_\_\_\_
36. Are there any HIGH QA projects within the data?  
 If so, place dataset to the QA office.  
 YES     NO
37. Does the data set need scanning?  
 YES     N/A
- Files located at: \\Cuprum\gen\_admin\Quality Assurance\Training Master\DOCs
38. Date of analyst IDOC/CDOC: \_\_\_\_\_ IDOC/CDOC within last 12 months?  
 YES     NO
39. Date of analyst's SOP reading: \_\_\_\_\_ Current SOP revision?  
 YES     NO
40. Date of LOD: 4/21/16 LOD within last 3 months (within 12 months for MDN)?  
 YES     NO     N/A
41. Date of LOQ: 4/21/16 LOQ within last 3 months (within 12 months for MDN)?  
 YES     NO     N/A
42. If MDN samples, date of last MDL study: \_\_\_\_\_
43. MDL study within last 12 months?  
 YES     NO     N/A
- Data can not be reported without a current IDOC/CDOC, LOD or LOQ.**
- Additional Comments: \_\_\_\_\_  
 YES     NO





[www.alphalab.com](http://www.alphalab.com)



Lab Number: L1636491

Client: AMEC Foster Wheeler E & I, Inc.

ATTN: Rod Pendleton

Project Name: USDC PENOBSCOT

Project Number: 3616166052.04.04

*The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.*

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# **Sample Delivery Group Information**



# Sample Delivery Group Form

Laboratory Job number: L1636491

Project Manager: Elizabeth Porta

Review Date: 11/10/2016

Project Number: 3616166052.04.04

Project Name: USDC PENOBSCOT

Received: 11/10/2016 10:16

Client Account: AMEC Foster Wheeler E & I, Inc.

Received by: KB

Samples Delivered by: FEDEX

Call Tracker #

Bill Of Laden Yes

Trackingnum 902056032885

Coc Present Present

Container Status Intact

Sample IDs

All Containers Accounted For? Yes

Were Extra Samples Received? No

Do Sample Labels and COC agree? Yes

Are Samples in Appropriate Containers? No  
TOC received in plastic

Are Samples Received within Holding time? Yes

pH of Samples upon Receipt N/A

Are samples Properly Preserved? Yes

Initial pH preserved in house with

Final pH

Other Issues

Chlorine Check N/A

Are VOA/VPH Vials Present? No

Aqueous: Do Vials Contain Head Space? N/A

Soils: Is MeOH Covering the Soil? N/A

Reagent H2O Preserved vials Frozen on N/A

Frozen by Client N/A

Cooler	Seal	Ice Present	Blue Ice Present	Temp. (Celsius)	Frozen upon Receipt	Delivered Direct from Site
A	Present/Intact	Yes	No	3.7 - IR Gun	No	No

# **LIMS Chain of Custody**



ALPHA ANALYTICAL LABORATORIES, INC.  
LOGIN CHAIN OF CUSTODY REPORT  
Dec 01 2016, 11:59 am

Login Number: L1636491

Account: AMEC-ME AMEC Foster Wheeler E & I, Inc. Project: 3616166052.04.04

Sample # Client ID Received: 10NOV16 Due Date: 05DEC16  
Mat PR Collected Container

L1636491-01 W-61-HIGH\_110816\_SE 3 S0 08NOV16 14:30 1-Plastic-A-GS

| DPKG-FULL Package Due Date: 12/05/16

A2-TOC-LK-2REPS,A2-TS,DPKG-FULL

L1636491-02 W-61-INT\_110816\_SED 3 S0 08NOV16 13:30 1-Plastic-A-GS

| Package Due Date: 12/05/16

A2-TOC-LK-2REPS,A2-TS

L1636491-03 W-61-LOW\_110816\_SED 3 S0 08NOV16 14:00 1-Plastic-A-GS

| Package Due Date: 12/05/16

A2-TOC-LK-2REPS,A2-TS

L1636491-04 W-61-MID\_110816\_SED 3 S0 08NOV16 14:15 1-Plastic-A-GS

| Package Due Date: 12/05/16

A2-TOC-LK-2REPS,A2-TS

L1636491-05 W-63-HIGH\_110816\_SE 3 S0 08NOV16 16:10 1-Plastic-A-GS

| Package Due Date: 12/05/16

A2-TOC-LK-2REPS,A2-TS

L1636491-06 W-63-INT\_110816\_SED 3 S0 08NOV16 16:40 1-Plastic-A-GS

| Package Due Date: 12/05/16

A2-TOC-LK-2REPS,A2-TS

L1636491-07 W-63-LOW\_110816\_SED 3 S0 08NOV16 16:30 1-Plastic-A-GS

| Package Due Date: 12/05/16

ALPHA ANALYTICAL LABORATORIES, INC.  
LOGIN CHAIN OF CUSTODY REPORT  
Dec 01 2016, 11:59 am

Login Number: L1636491

Account: AMEC-ME AMEC Foster Wheeler E & I, Inc. Project: 3616166052.04.04

Sample #	Client ID	Received: 10NOV16 Mat PR Collected	Due Date: 05DEC16 Container
----------	-----------	---------------------------------------	--------------------------------

A2-TOC-LK-2REPS,A2-TS

L1636491-08 W-63-MID\_110816\_SED 3 S0 08NOV16 16:20 1-Plastic-A-GS

| Package Due Date: 12/05/16

A2-TOC-LK-2REPS,A2-TS

# Container Tracking





**ALPHA ANALYTICAL LABORATORIES**  
**Container Tracking Report**

Container ID	Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1636491-01A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel
L1636491-01A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-01A	Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-01A	Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1636491-02A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel
L1636491-02A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-02A	Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-02A	Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1636491-03A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel
L1636491-03A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-03A	Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-03A	Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1636491-04A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel
L1636491-04A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-04A	Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-04A	Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1636491-05A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel
L1636491-05A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-05A	Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-05A	Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1636491-06A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel
L1636491-06A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-06A	Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-06A	Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1636491-07A	Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel

Container ID Type	Status	Transaction Date	From Response	Location	To Operator	Response	Location	Operator
L1636491-07A Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-07A Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-07A Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read
L1636491-08A Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-V3	A2-CUSTODY-FRZ1-V3	Sonal Patel
L1636491-08A Plastic-A-GS	INTACT	11-NOV-16	CUSTODY	A2-CUSTODY-NOAA4	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1636491-08A Plastic-A-GS	INTACT	10-NOV-16	CUSTODY	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-NOAA4	A2-CUSTODY-NOAA4	Kim L. Bailey
L1636491-08A Plastic-A-GS	INTACT	10-NOV-16	A2-LOGIN	A2-LOGIN	Brett Read	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brett Read

# Chain of Custody





# Wet Chemistry



# **Total Solids / Percent Moisture Analysis**

# Sample Raw Data

ALPHA ANALYTICAL LABS  
**WET CHEMISTRY DEPARTMENT**  
 PERCENT TOTAL SOLIDS

Last Change 3/26/13 File A2-TS_S.xlt
---

Sample Number: \_\_\_\_\_

Client: \_\_\_\_\_

Analysis: %TOTAL SOLIDS  
                   in solids  
 Method: STM 2540-G

Product: A2-TS  
 Analyte: Solids, Total  
 Analysis Date: 11/11/2016 12:39  
 Technician: SP  
 Work group: WG951457  
 MDL: 0.10%  
 Scale Serial#: 14621307

		-----105 degrees C -----							
	Sample Number	Tare Weight (gm)	Gross Weight (gm)	Net Weight(1) (gm)	Net Weight(2) (gm)	Net Weight(3) (gm)	Net Weight(4) (gm)	Net Weight(5) (gm)	RESULT %
DUP	WG951457-1	1.19	10.73	6.77	6.78				58.49
	L1634600-01	1.19	10.86	6.75	6.75				57.50
	L1634600-02	1.2	7.6	4.11	4.11				45.47
	L1634600-03	1.18	8.13	2.99	2.99				26.04
	L1634600-04	1.18	10.08	5.24	5.25				45.62
	L1634600-05	1.19	10.79	5.17	5.17				41.46
	L1634600-06	1.18	8.96	5.67	5.68				57.71
SAMP	L1636491-01	1.19	7.6	3.17	3.18				30.89
SAMP	L1636491-02	1.18	7.45	2.92	2.93				27.75
SAMP	L1636491-03	1.19	8.23	4.05	4.06				40.63
SAMP	L1636491-04	1.2	6.78	3.41	3.42				39.61
SAMP	L1636491-05	1.16	9.91	7.97	3.74				29.49
SAMP	L1636491-06	1.19	9.68	3.73	5.19				29.92
SAMP	L1636491-07	1.19	7.36	5.18	4.33				50.89
SAMP	L1636491-08	1.2	6.46	4.33	7.98				59.51
SAMP									
SAMP									
SAMP									
SAMP									
SAMP									
SAMP									

Comments:



# **Work Group**

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Nov 14 2016, 11:57 am

Work Group: WG951457 for Department: 7 Wet Chemistry

Created: 11-NOV-16 Due: Operator: SP

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1634600-01	TM-SD-83	S A2-TS	SOIL	DONE	U	1102	1117	S0	Glass-A.06
L1634600-02	TM-SD-77	S A2-TS	SOIL	DONE	U	1102	1117	S0	Glass-A.06
L1634600-03	TM-SD-72	S A2-TS	SOIL	DONE	U	1102	1117	S0	Glass-A.06
L1634600-04	TM-SD-67	S A2-TS	SOIL	DONE	U	1102	1117	S0	Glass-A.06
L1634600-05	TM-SD-59	S A2-TS	SOIL	DONE	U	1102	1117	S0	Glass-A.06
L1634600-06	TM-SD-62	S A2-TS	SOIL	DONE	U	1102	1117	S0	Glass-A.06
L1636491-01	W-61-HIGH_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
L1636491-02	W-61-INT_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
L1636491-03	W-61-LOW_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
L1636491-04	W-61-MID_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
L1636491-05	W-63-HIGH_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
L1636491-06	W-63-INT_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
L1636491-07	W-63-LOW_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
L1636491-08	W-63-MID_110816_SED	S A2-TS	SOIL	DONE	U	1115	1205	S0	Plastic-A.120
WG951457-1	Duplicate Sample	S A2-TS	SOIL	DONE	U				

Comments:

WG951457-1 L1634600-01

# **Organic Carbon Analysis**

# Sequence Logs

Date of report: 11/21/2016 9:34 AM  
 User ID: mansfield\_toc1

Run Details			Results				Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
K1	1	10.630	11/18/2016 9:59:35 AM	15.052	21.007	0.069	1460	1642	2888	14780
BLANK	2		11/18/2016 10:04:20 AM	100	2170	101	1463	1483	1700	14739
K1	3	10.180	11/18/2016 10:09:05 AM	14.617	24.906	-0.009	1462	1627	3026	14714
K1	4	10.060	11/18/2016 10:14:03 AM	14.742	26.596	-0.013	1464	1627	3097	14726
0	5	9.780	11/18/2016 10:27:51 AM	-0.016%	3.649%	-0.171%	1461	1473	2992	14687
1000	6	10.410	11/18/2016 10:32:34 AM	0.089%	3.572%	-0.168%	1465	1492	3070	14722
5000	7	10.440	11/18/2016 10:37:16 AM	0.458%	3.501%	-0.194%	1466	1550	3103	14731
10000	8	10.350	11/18/2016 10:41:58 AM	0.963%	3.761%	-0.229%	1466	1626	3272	14731
20000	9	11.110	11/18/2016 10:46:40 AM	2.023%	3.623%	-0.195%	1465	1809	3506	14723
40000	10	10.570	11/18/2016 10:51:23 AM	3.580%	3.800%	-0.178%	1467	2037	3731	14744
20000	11	10.430	11/18/2016 10:59:31 AM	1.909%	3.927%	-0.134%	1465	1772	3497	14727
1000	12	9.970	11/18/2016 11:04:17 AM	0.066%	4.198%	-0.091%	1465	1490	3250	14737
ICV	13	10.240	11/18/2016 11:09:04 AM	0.918%	4.239%	-0.102%	1467	1620	3441	14755
ICB	14	63.890	11/18/2016 11:13:50 AM	-0.003%	0.005%	-0.016%	1467	1479	1616	14753
HICV	15	51.680	11/18/2016 11:18:32 AM	3.639%	0.838%	0.027%	1464	4247	6063	14765
SRM1944	16	11.360	11/18/2016 11:28:33 AM	4.244%	2.230%	0.627%	1464	2199	3313	14839
MB	17	86.190	11/18/2016 11:33:15 AM	0.011%	0.009%	-0.032%	1464	1491	1645	14702
SRM194	18	8.890	11/18/2016 11:37:56 AM	3.501%	0.467%	0.463%	1461	1941	2227	14774
MB	19	79.630	11/18/2016 11:42:37 AM	0.007%	-0.022%	-0.024%	1463	1486	1542	14703
163678818	20	19.410	11/18/2016 12:39:50 PM	0.132%	0.234%	-0.058%	1459	1512	1813	14673
163678818	21	27.090	11/18/2016 12:44:30 PM	0.121%	0.255%	-0.049%	1459	1522	1916	14675
163678819	22	21.530	11/18/2016 12:49:11 PM	0.127%	0.414%	-0.026%	1460	1516	1988	14692
163678819	23	15.070	11/18/2016 12:53:52 PM	0.126%	0.375%	-0.074%	1461	1504	1848	14692
163678820	24	15.660	11/18/2016 12:58:33 PM	0.073%	0.322%	-0.027%	1461	1494	1815	14708
163678820	25	11.150	11/18/2016 1:03:15 PM	0.073%	0.248%	-0.069%	1459	1487	1719	14684
CCV	26	10.190	11/18/2016 1:07:56 PM	1.0%	4.171%	-0.199%	1461	1624	3409	14677

Run	Run Details			Results					Signals				
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR			
CCB	27	70.540	11/18/2016 1:12:36 PM	-0.022%	-0.16%	-0.322%	1462	1473	1554	14693			
163678820D	28	21.180	11/18/2016 1:42:16 PM	0.062%	0.319%	-0.30%	1461	1496	1883	14698			
163678820D	29	16.110	11/18/2016 1:46:56 PM	0.063%	0.336%	0.069%	1457	1491	1826	14691			
163678820MS	30	17.170	11/18/2016 1:51:36 PM	0.676%	2.446%	-0.37%	1461	1648	3413	14703			
163678820MS	31	17.570	11/18/2016 1:56:16 PM	0.699%	2.425%	-0.40%	1463	1660	3449	14725			
163649101	32	5.130	11/18/2016 2:00:59 PM	12.514	1.373%	2.054%	1466	2441	2840	14912			
163649101	33	5.730	11/18/2016 2:05:39 PM	21.513	1.900%	2.095%	1463	3309	3858	14904			
163649102	34	14.200	11/18/2016 2:10:19 PM	7.285%	0.805%	0.993%	1463	3020	3591	14931			
163649102	35	8.690	11/18/2016 2:14:58 PM	9.912%	1.001%	1.221%	1461	2759	3222	14861			
163649103	36	10.690	11/18/2016 2:19:38 PM	7.558%	0.852%	1.469%	1461	2687	3167	14932			
163649103	37	11.980	11/18/2016 2:24:18 PM	7.854%	0.903%	1.648%	1462	2890	3437	15007			
CCV	38	10.330	11/18/2016 2:28:57 PM	1.007%	4.126%	-1.28%	1462	1629	3419	14699			
CCB	39	47.910	11/18/2016 2:33:37 PM	-0.04%	-0.27%	-0.34%	1464	1475	1548	14714			
163649101	40	11.120	11/18/2016 3:17:18 PM	14.003	1.442%	2.579%	1459	3805	4556	15101			
163649101	41	9.120	11/18/2016 3:21:56 PM	14.576	1.439%	2.609%	1460	3465	4101	15043			
163649102	42	5.570	11/18/2016 3:26:35 PM	10.287	0.844%	1.215%	1458	2326	2634	14776			
163649102	43	14.060	11/18/2016 3:31:14 PM	9.378%	1.003%	1.231%	1460	3439	4114	14946			
163649104	44	7.150	11/18/2016 3:35:53 PM	-0.048%	-0.401%	-0.390%	1461	1468	1480	14666			
163649104	45	7.780	11/18/2016 3:40:32 PM	10.848	0.960%	1.624%	1459	2734	3150	14871			
163649105	46	5.090	11/18/2016 3:45:10 PM	0.309%	-1.58%	-0.315%	1460	1497	1589	14673			
163649105	47	10.240	11/18/2016 3:49:49 PM	0.475%	0.178%	-0.14%	1461	1549	1743	14706			
163649106	48	9.310	11/18/2016 3:54:27 PM	8.998%	0.874%	1.552%	1459	2728	3169	14900			
163649106	49	7.930	11/18/2016 3:59:06 PM	8.772%	0.797%	1.364%	1462	2516	2887	14872			
CCV	50	10.560	11/18/2016 4:29:41 PM	0.978%	4.174%	-1.45%	1462	1628	3475	14695			
CCB	51	64.320	11/18/2016 4:34:25 PM	-0.04%	-0.16%	-0.39%	1465	1474	1558	14715			
163649104	52	8.100	11/18/2016 4:47:08 PM	11.762	1.318%	1.835%	1463	2901	3442	14944			
163649104	53	11.490	11/18/2016 4:52:43 PM	10.069	1.222%	1.312%	1472	3211	3884	15041			

Run	Run Details			Results				Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
163649104	53	11.490	11/18/2016 4:52:43 PM	10.069	1.222%	1.312%	1472	3211	3884	15041	
163649105	54	14.860	11/18/2016 4:58:59 PM	0.404%	0.370%	0.089%	1479	1586	1925	14913	
163649105	55	10.910	11/18/2016 5:03:56 PM	0.278%	0.291%	0.691%	1464	1536	1784	14850	
CCV	60	10.210	11/19/2016 10:44:39 AM	0.919%	3.408%	-1.599%	1459	1590	3074	14456	
CCB	61	64.140	11/19/2016 10:49:26 AM	-0.06%	-0.022%	-0.083%	1460	1463	1531	14626	

Date of report: 11/22/2016 10:23 AM  
 User ID: Alpha Analytical

Run Details			Results				Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
K1	1	10.330	11/21/2016 9:41:22 A	19.622	0.006	2.343	26387	31343	31307	2925
BLANK	2		11/21/2016 9:46:12 A	31	-36	620	26304	26955	26919	2692
0	3	9.940	11/21/2016 9:51:02 A	-0.012%	8.231%	0.997%	26283	26508	26488	2648
1000	4	10.110	11/21/2016 9:55:54 A	0.088%	11.690	0.406%	26261	26591	26579	2636
5000	5	10.320	11/21/2016 10:00:53	0.484%	13.654	0.208%	26257	27370	27363	2633
10000	6	10.480	11/21/2016 10:05:51	0.974%	5.638%	0.164%	26244	28385	28360	2631
20000	7	10.310	11/21/2016 10:10:49	2.060%	10.140	0.160%	26248	30577	30562	2631
40000	8	10.340	11/21/2016 10:15:39	2.939%	20.661	0.059%	26268	32397	32406	2631
40000	9	10.710	11/21/2016 10:23:17	3.879%	7.639%	0.017%	26294	34630	34610	2633
1000	10	10.160	11/21/2016 10:28:07	0.094%	3.579%	0.036%	26291	26574	26544	2633
ICV	11	10.410	11/21/2016 10:37:18	1.001%	9.606%	0.047%	26308	28471	28455	2635
ICB	12	51.460	11/21/2016 10:42:09	0.0%	2.032%	0.010%	26281	26375	26360	2632
HICV	13	52.080	11/21/2016 10:47:12	3.805%	6.109%	0.006%	26303	65727	65759	2634
SRM1944	14	12.870	11/21/2016 10:52:02	4.409%	1265.09	1.013%	26314	37876	41420	2656
MB	15	60.390	11/21/2016 10:56:52	0.004%	0.978%	0.002%	26257	26394	26369	2629
BLANK	16		11/21/2016 11:01:42	-9	-11	42	26261	26294	26283	2630
SRM1944	17	11.820	11/21/2016 11:06:33	4.780%	16.151	1.108%	26273	37760	37777	2652
MB	18	45.150	11/21/2016 11:11:23	0.012%	1.913%	0.0%	26286	26452	26446	2632
163649107	19	16.400	11/21/2016 11:16:14	2.478%	10.809	0.549%	26289	34562	34576	2647
163649107	20	15.590	11/21/2016 11:21:04	4.291%	14.287	0.561%	26302	39782	39806	2648
163649108	21	12.960	11/21/2016 11:25:55	7.875%	10.873	1.015%	26315	46846	46852	2657
163649108	22	11.060	11/21/2016 11:30:45	4.380%	5.343%	0.824%	26331	36153	36141	2652
163649107	23	12.590	11/21/2016 11:43:08	2.257%	5.416%	0.695%	26343	32186	32176	2652
163649107	24	7.020	11/21/2016 11:48:08	2.711%	12.950	0.715%	26351	30269	30264	2647
CCV	25	10.270	11/21/2016 11:53:06	1.063%	-2.213%	0.083%	26344	28584	28554	2639
CCB	26	60.500	11/21/2016 11:58:04	0.003%	-376%	0.016%	26315	26427	26397	2637



Run	Run Details			Results				Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
163649108	27	13.340	11/21/2016 12:25:38	4.792%	9.881%	0.950%	26369	39322	39326	2661	
163649108	28	11.890	11/21/2016 12:30:29	4.310%	14.527	1.065%	26334	36771	36784	2658	
163660201	29	9.270	11/21/2016 12:35:20	2.793%	13.239	0.720%	26325	31632	31634	2647	
163660201	30	10.900	11/21/2016 12:40:11	2.894%	28.357	0.786%	26322	32781	32824	2650	
163660202	31	7.610	11/21/2016 12:45:01	3.373%	22.100	0.844%	26322	31581	31593	2646	
163660202	32	13.140	11/21/2016 12:49:52	3.583%	6.573%	0.787%	26329	35902	35896	2653	
163660203	33	9.890	11/21/2016 12:54:42	7.568%	12.869	2.098%	26336	41589	41592	2671	
163660203	34	6.700	11/21/2016 12:59:33	7.461%	10.176	2.083%	26340	36549	36539	2660	
163660204	35	9.610	11/21/2016 1:04:23 P	7.952%	15.136	2.076%	26347	41899	41906	2671	
163660204	36	7.560	11/21/2016 1:09:14 P	7.207%	16.835	1.943%	26355	37468	37471	2663	
CCV	37	10.530	11/21/2016 2:19:45 P	1.036%	3.885%	1.209%	26334	28766	28750	2658	
CCB	38	62.200	11/21/2016 2:24:44 P	0.001%	0.365%	0.028%	26291	26386	26366	2635	
163660201D	39	11.730	11/21/2016 2:30:55 P	2.179%	12.400	0.673%	26276	31538	31545	2644	
163660201D	40	10.910	11/21/2016 2:35:46 P	4.871%	3.750%	0.819%	26266	37019	37003	2645	
163660201MS	41	15.050	11/21/2016 2:40:36 P	4.496%	5.436%	0.732%	26280	39950	39943	2650	
163660201MS	42	7.100	11/21/2016 2:45:27 P	7.589%	10.883	1.103%	26280	37162	37154	2644	
163660201MS	43	16.130	11/21/2016 2:50:18 P	2.884%	3.945%	0.641%	26266	35728	35717	2647	
163660201MS	44	11.090	11/21/2016 2:55:08 P	5.737%	11.066	0.949%	26264	39124	39126	2647	
163660205	45	12.010	11/21/2016 2:59:59 P	7.591%	17.788	1.982%	26252	44794	44816	2668	
163660205	46	10.440	11/21/2016 3:04:49 P	6.668%	20.899	1.899%	26258	40457	40480	2662	
163660206	47	9.180	11/21/2016 3:09:40 P	8.665%	23.767	2.160%	26272	42443	42466	2663	
163660206	48	6.190	11/21/2016 3:14:30 P	8.659%	34.513	2.175%	26272	37189	37211	2653	
CCV	49	10.310	11/21/2016 3:40:43 P	1.045%	16.312	0.142%	26275	28496	28508	2633	
CCB	50	81.380	11/21/2016 3:45:33 P	0.002%	1.620%	0.001%	26238	26332	26336	2627	
163660201D	51	7.450	11/21/2016 3:51:33 P	2.493%	9.152%	1.010%	26228	30097	30087	2639	
163660201D	52	15.320	11/21/2016 3:56:32 P	3.545%	11.868	0.911%	26234	37299	37314	2650	
163660201MS	53	13.020	11/21/2016 4:01:30 P	3.368%	2.793%	0.794%	26229	35161	35144	2643	

Run	Run Details			Results				Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR	
163660201MS	53	13.020	11/21/2016 4:01:30 P	3.368%	2.793%	0.794%	26229	35161	35144	2643	
163660201MS	54	13.760	11/21/2016 4:06:28 P	3.701%	5.616%	0.827%	26216	36568	36560	2644	
163660201MS	55	11.570	11/21/2016 4:11:23 P	4.524%	12.965	0.767%	26226	36819	36827	2641	
163660201MS	56	13.960	11/21/2016 4:16:17 P	3.754%	9.768%	0.793%	26218	36860	36865	2643	
163660207	57	10.090	11/21/2016 4:21:08 P	10.028%	23.426	2.444%	26205	46750	46777	2664	
163660207	58	7.380	11/21/2016 4:26:00 P	10.272%	25.253	2.421%	26211	41608	41624	2654	
163660208	59	5.740	11/21/2016 4:30:52 P	9.955%	31.676	2.463%	26209	37841	37856	2648	
163660208	60	8.740	11/21/2016 4:35:45 P	9.696%	24.444	2.444%	26226	43453	43475	2661	
CCV	1	10.540	11/21/2016 4:41:09 P	1.063%	9.488%	0.029%	26230	28517	28514	2627	
CCB	2	78.500	11/21/2016 4:46:00 P	0.001%	0.869%	0.004%	26210	26292	26282	2625	
163660209	3	5.700	11/21/2016 4:53:44 P	8.925%	20.734	2.373%	26220	36597	36598	2648	
163660209	4	5.220	11/21/2016 4:58:43 P	9.463%	31.348	2.462%	26232	36305	36316	2648	
163660210	5	9.120	11/21/2016 5:03:42 P	7.588%	13.457	2.074%	26219	40322	40324	2656	
163660210	6	8.120	11/21/2016 5:08:40 P	7.995%	14.554	2.193%	26199	39435	39436	2653	
163660211	7	11.080	11/21/2016 5:13:36 P	9.037%	15.589	2.270%	26221	46565	46578	2667	
163660211	8	11.290	11/21/2016 5:18:30 P	7.456%	15.702	1.951%	26236	43363	43377	2663	
163660212	9	11.350	11/21/2016 5:23:23 P	10.773%	27.233	2.189%	26222	50956	50999	2666	
163660212	10	12.300	11/21/2016 5:28:14 P	10.867%	23.651	2.239%	26235	53274	53313	2672	
163660213	11	7.330	11/21/2016 5:33:07 P	-0.008%	9.922%	0.083%	26232	26289	26280	2628	
163660213	12	9.210	11/21/2016 5:37:59 P	19.590%	36.522	3.435%	26228	62615	62664	2678	
CCV	13	10.040	11/21/2016 5:42:50 P	1.068%	9.960%	0.030%	26242	28435	28432	2628	
CCB	14	66.230	11/21/2016 5:47:41 P	-0.002%	1.373%	0.0%	26216	26249	26244	2625	
163660213	15	6.780	11/22/2016 9:13:46 A	10.924%	15.420	14.325%	26053	42399	42397	2768	
163660213	16	11.890	11/22/2016 9:18:36 A	10.652%	22.173	3.073%	25977	51770	51803	2661	
163660214	17	13.440	11/22/2016 9:23:48 A	6.899%	23.674	2.527%	25961	44978	45023	2655	
163660214	18	10.550	11/22/2016 9:28:38 A	7.362%	28.436	2.576%	25955	41873	41914	2643	
163660215	19	7.990	11/22/2016 9:33:28 A	6.909%	35.840	2.290%	25959	37273	37311	2629	

Reported on 11/22/2016 10:23 AM by Alpha Analytical

Run	Run Details			Results			Signals			
	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
163660215	19	7.990	11/22/2016 9:33:28 A	6.909%	35.840	2.290%	25959	37273	37311	2629
163660215	20	9.740	11/22/2016 9:38:18 A	6.868%	30.801	2.218%	25968	39658	39699	2636
163660216	21	6.290	11/22/2016 9:43:08 A	7.462%	46.249	2.432%	25973	35598	35637	2626
163660216	22	6.340	11/22/2016 9:47:58 A	7.548%	46.602	2.375%	25983	35786	35826	2626
163660217	23	9.500	11/22/2016 9:52:49 A	6.955%	35.885	2.119%	25994	39497	39547	2636
163660217	24	8.430	11/22/2016 9:57:39 A	7.266%	34.509	2.185%	26008	38526	38565	2634
CCV	25	10.030	11/22/2016 10:02:29	1.047%	20.847	0.006%	26028	28172	28193	2606
CCB	26	71.290	11/22/2016 10:07:20	0.002%	1.020%	0.005%	26000	26098	26089	2604

# **Sample Raw Data**

<b>Date of report</b>	11/21/2016 9:34:16AM
<b>User ID</b>	mansfield_toc1

DATE & TIME	11/18/2016 9:59:35 AM	P_ID	111816CM
RUN TYPE	K1	USER ID	mansfield_toc1
WEIGHT (mg)	10.630	MODE	CHN

SIGNALS			
ZR	14604	AVERAGE RESULTS	
KC	15.052	NR	14780
KH	21.007	CR	16420
KN	0.069	HR	28888
BLANKS	40	1236	91
K FACTORS	1.0%	5.03%	11.67%
FILL TIME	27 Seconds		

DATE & TIME	11/18/2016 10:04:20 AM	P_ID	111816CM
RUN TYPE	BLANK	USER ID	mansfield_toc1
		MODE	CHN

SIGNALS			
ZR	14638	AVERAGE RESULTS	
CARBON	100	NR	14739
HYDROGEN	2170	CR	14839
NITROGEN	101	HR	17009
FILL TIME	26 Seconds		

DATE & TIME	11/18/2016 10:09:05 AM	P_ID	111816CM
RUN TYPE	K1	USER ID	mansfield_toc1
WEIGHT (mg)	10.180	MODE	CHN

SIGNALS			
ZR	14629	AVERAGE RESULTS	
KC	14.617	NR	14714
KH	24.906	CR	16272
KN	-0.09	HR	30261
BLANKS	70	1236	96
K FACTORS	1.0%	5.03%	11.67%
FILL TIME	26 Seconds		
NUMBER	MESSAGE		
8	CHECK FOR SAMPLE DROP		
11	HYDROGEN K FACTOR OUT OF TOLERANCE		

DATE & TIME	11/18/2016 10:14:03 AM	P_ID	111816CM
RUN TYPE	K1	USER ID	mansfield_toc1
WEIGHT (mg)	10.060	MODE	CHN

SIGNALS			
ZR	14645	AVERAGE RESULTS	
KC	14.742	NR	14726
KH	26.596	CR	16279
KN	-0.13	HR	30973
BLANKS	70	1236	96
K FACTORS	1.0%	5.03%	11.67%
FILL TIME	27 Seconds		

NUMBER MESSAGE  
8 CHECK FOR SAMPLE DROP

DATE & TIME	11/18/2016 10:27:51 AM	P_ID	111816CM
SAMPLE ID	0	USER ID	mansfield_toc1
WEIGHT (mg)	9.780	MODE	CHN

SIGNALS			
	ZR	14615	
	NR	14687	
	CR	14734	
	HR	29921	
CARBON	-016%		
HYDROGEN	3.649%		
NITROGEN	-171%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	23 Seconds		

DATE & TIME	11/18/2016 10:32:34 AM	P_ID	111816CM
SAMPLE ID	1000	USER ID	mansfield_toc1
WEIGHT (mg)	10.410	MODE	CHN

SIGNALS			
	ZR	14651	
	NR	14722	
	CR	14928	
	HR	30700	
CARBON	0.089%		
HYDROGEN	3.572%		
NITROGEN	-168%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	24 Seconds		

DATE & TIME	11/18/2016 10:37:16 AM	P_ID	111816CM
SAMPLE ID	5000	USER ID	mansfield_toc1
WEIGHT (mg)	10.440	MODE	CHN

SIGNALS			
	ZR	14664	
	NR	14731	
	CR	15504	
	HR	31030	
CARBON	0.458%		
HYDROGEN	3.501%		
NITROGEN	-194%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	23 Seconds		

DATE & TIME	11/18/2016 10:41:58 AM	P_ID	111816CM
SAMPLE ID	10000	USER ID	mansfield_toc1
WEIGHT (mg)	10.350	MODE	CHN

SIGNALS	
ZR	14669

CARBON	0.963%		NR	14731
HYDROGEN	3.761%		CR	16266
NITROGEN	-.229%		HR	32720
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	24 Seconds			

DATE & TIME	11/18/2016 10:46:40 AM	P_ID	111816CM
SAMPLE ID	20000	USER ID	mansfield_toc1
WEIGHT (mg)	11.110	MODE	CHN

SIGNALS

		ZR	14658
CARBON	2.023%	NR	14723
HYDROGEN	3.623%	CR	18096
NITROGEN	-.195%	HR	35069
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	24 Seconds		

DATE & TIME	11/18/2016 10:51:23 AM	P_ID	111816CM
SAMPLE ID	40000	USER ID	mansfield_toc1
WEIGHT (mg)	10.570	MODE	CHN

SIGNALS

		ZR	14675
CARBON	3.580%	NR	14744
HYDROGEN	3.800%	CR	20376
NITROGEN	-.178%	HR	37314
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	24 Seconds		

DATE & TIME	11/18/2016 10:59:31 AM	P_ID	111816CM
SAMPLE ID	20000	USER ID	mansfield_toc1
WEIGHT (mg)	10.430	MODE	CHN

SIGNALS

		ZR	14651
CARBON	1.909%	NR	14727
HYDROGEN	3.927%	CR	17723
NITROGEN	-.134%	HR	34971
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	11/18/2016 11:04:17 AM	P_ID	111816CM
SAMPLE ID	1000	USER ID	mansfield_toc1
WEIGHT (mg)	9.970	MODE	CHN

SIGNALS			
	ZR	14654	
	NR	14737	
	CR	14904	
	HR	32500	
CARBON	0.066%		
HYDROGEN	4.198%		
NITROGEN	-.091%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	11/18/2016 11:09:04 AM	P_ID	111816CM
SAMPLE ID	ICV	USER ID	mansfield_toc1
WEIGHT (mg)	10.240	MODE	CHN

SIGNALS			
	ZR	14674	
	NR	14755	
	CR	16207	
	HR	34410	
CARBON	0.918%		
HYDROGEN	4.239%		
NITROGEN	-.102%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	11/18/2016 11:13:50 AM	P_ID	111816CM
SAMPLE ID	ICB	USER ID	mansfield_toc1
WEIGHT (mg)	63.890	MODE	CHN

SIGNALS			
	ZR	14672	
	NR	14753	
	CR	14797	
	HR	16166	
CARBON	-.003%		
HYDROGEN	0.005%		
NITROGEN	-.016%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	11/18/2016 11:18:32 AM	P_ID	111816CM
SAMPLE ID	HICV	USER ID	mansfield_toc1
WEIGHT (mg)	51.680	MODE	CHN

SIGNALS			
	ZR	14649	
	NR	14765	
	CR	42478	
	HR	60635	
CARBON	3.639%		
HYDROGEN	0.838%		
NITROGEN	0.027%		
BLANKS	70	1236	96



K FACTORS 14.698 39.092 1.433  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 24 Seconds

DATE & TIME 11/18/2016 11:28:33 AM P\_ID 111816CM  
 SAMPLE ID SRM1944 USER ID mansfield\_toc1  
 WEIGHT (mg) 11.360 MODE CHN

SIGNALS  
 ZR 14641  
 CARBON 4.244% NR 14839  
 HYDROGEN 2.230% CR 21995  
 NITROGEN 0.627% HR 33133  
 BLANKS 70 1236 96  
 K FACTORS 14.698 39.092 1.433  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 23 Seconds

DATE & TIME 11/18/2016 11:33:15 AM P\_ID 111816CM  
 SAMPLE ID MB USER ID mansfield\_toc1  
 WEIGHT (mg) 86.190 MODE CHN

SIGNALS  
 ZR 14645  
 CARBON 0.011% NR 14702  
 HYDROGEN 0.009% CR 14911  
 NITROGEN -.032% HR 16457  
 BLANKS 70 1236 96  
 K FACTORS 14.698 39.092 1.433  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 23 Seconds

DATE & TIME 11/18/2016 11:37:56 AM P\_ID 111816CM  
 SAMPLE ID SRM194 USER ID mansfield\_toc1  
 WEIGHT (mg) 8.890 MODE CHN

SIGNALS  
 ZR 14619  
 CARBON 3.501% NR 14774  
 HYDROGEN 0.467% CR 19419  
 NITROGEN 0.463% HR 22279  
 BLANKS 70 1236 96  
 K FACTORS 14.698 39.092 1.433  
 FILL COMB BOOST1 BOOST2  
 0 0 0 0  
 FILL TIME 23 Seconds

DATE & TIME 11/18/2016 11:42:37 AM P\_ID 111816CM  
 SAMPLE ID MB USER ID mansfield\_toc1  
 WEIGHT (mg) 79.630 MODE CHN

				SIGNALS
				ZR 14634
CARBON	0.007%			NR 14703
HYDROGEN	-0.022%			CR 14860
NITROGEN	-0.024%			HR 15426
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	22 Seconds			

DATE & TIME	11/18/2016 12:39:50 PM	P_ID	111816CM
SAMPLE ID	163678818	USER ID	mansfield_toc1
WEIGHT (mg)	19.410	MODE	CHN

				SIGNALS
				ZR 14593
CARBON	0.132%			NR 14673
HYDROGEN	0.234%			CR 15121
NITROGEN	-0.058%			HR 18133
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	22 Seconds			

DATE & TIME	11/18/2016 12:44:30 PM	P_ID	111816CM
SAMPLE ID	163678818	USER ID	mansfield_toc1
WEIGHT (mg)	27.090	MODE	CHN

				SIGNALS
				ZR 14598
CARBON	0.121%			NR 14675
HYDROGEN	0.255%			CR 15226
NITROGEN	-0.049%			HR 19164
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	22 Seconds			

DATE & TIME	11/18/2016 12:49:11 PM	P_ID	111816CM
SAMPLE ID	163678819	USER ID	mansfield_toc1
WEIGHT (mg)	21.530	MODE	CHN

				SIGNALS
				ZR 14604
CARBON	0.127%			NR 14692
HYDROGEN	0.414%			CR 15165
NITROGEN	-0.026%			HR 19884
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	22 Seconds			

DATE & TIME	11/18/2016 12:53:52 PM	P_ID	111816CM
SAMPLE ID	163678819	USER ID	mansfield_toc1
WEIGHT (mg)	15.070	MODE	CHN

SIGNALS

		ZR	14612
CARBON	0.126%	NR	14692
HYDROGEN	0.375%	CR	15042
NITROGEN	-.074%	HR	18487
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	22 Seconds		

DATE & TIME	11/18/2016 12:58:33 PM	P_ID	111816CM
SAMPLE ID	163678820	USER ID	mansfield_toc1
WEIGHT (mg)	15.660	MODE	CHN

SIGNALS

		ZR	14618
CARBON	0.073%	NR	14708
HYDROGEN	0.322%	CR	14946
NITROGEN	-.027%	HR	18153
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	23 Seconds		

DATE & TIME	11/18/2016 1:03:15 PM	P_ID	111816CM
SAMPLE ID	163678820	USER ID	mansfield_toc1
WEIGHT (mg)	11.150	MODE	CHN

SIGNALS

		ZR	14599
CARBON	0.073%	NR	14684
HYDROGEN	0.248%	CR	14874
NITROGEN	-.069%	HR	17193
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	24 Seconds		

DATE & TIME	11/18/2016 1:07:56 PM	P_ID	111816CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.190	MODE	CHN

SIGNALS

		ZR	14610
CARBON	1.0%	NR	14677
HYDROGEN	4.171%	CR	16245
NITROGEN	-.199%	HR	34095

BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	22 Seconds		

DATE & TIME	11/18/2016 1:12:36 PM	P_ID	111816CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	70.540	MODE	CHN

SIGNALS			
	ZR	14629	
CARBON	-0.002%	NR	14693
HYDROGEN	-0.016%	CR	14738
NITROGEN	-0.032%	HR	15543
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	22 Seconds		

DATE & TIME	11/18/2016 1:42:16 PM	P_ID	111816CM
SAMPLE ID	163678820D	USER ID	mansfield_toc1
WEIGHT (mg)	21.180	MODE	CHN

SIGNALS			
	ZR	14611	
CARBON	0.062%	NR	14698
HYDROGEN	0.319%	CR	14961
NITROGEN	-0.030%	HR	18838
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	22 Seconds		

DATE & TIME	11/18/2016 1:46:56 PM	P_ID	111816CM
SAMPLE ID	163678820D	USER ID	mansfield_toc1
WEIGHT (mg)	16.110	MODE	CHN

SIGNALS			
	ZR	14579	
CARBON	0.063%	NR	14691
HYDROGEN	0.336%	CR	14911
NITROGEN	0.069%	HR	18261
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	11/18/2016 1:51:36 PM	P_ID	111816CM
SAMPLE ID	163678820MS	USER ID	mansfield_toc1
WEIGHT (mg)	17.170	MODE	CHN

				SIGNALS
				ZR 14616
CARBON	0.676%			NR 14703
HYDROGEN	2.446%			CR 16480
NITROGEN	-.037%			HR 34132
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	21 Seconds			

DATE & TIME	11/18/2016 1:56:16 PM	P_ID	111816CM
SAMPLE ID	163678820MS	USER ID	mansfield_toc1
WEIGHT (mg)	17.570	MODE	CHN

				SIGNALS
				ZR 14639
CARBON	0.699%			NR 14725
HYDROGEN	2.425%			CR 16601
NITROGEN	-.040%			HR 34494
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	21 Seconds			

DATE & TIME	11/18/2016 2:00:59 PM	P_ID	111816CM
SAMPLE ID	163649101	USER ID	mansfield_toc1
WEIGHT (mg)	5.130	MODE	CHN

				SIGNALS
				ZR 14665
CARBON	12.514%			NR 14912
HYDROGEN	1.373%			CR 24418
NITROGEN	2.054%			HR 28408
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	25 Seconds			

DATE & TIME	11/18/2016 2:05:39 PM	P_ID	111816CM
SAMPLE ID	163649101	USER ID	mansfield_toc1
WEIGHT (mg)	5.730	MODE	CHN

				SIGNALS
				ZR 14636
CARBON	21.513%			NR 14904
HYDROGEN	1.900%			CR 33092
NITROGEN	2.095%			HR 38584
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	21 Seconds			

DATE & TIME	11/18/2016 2:10:19 PM	P_ID	111816CM
SAMPLE ID	163649102	USER ID	mansfield_toc1
WEIGHT (mg)	14.200	MODE	CHN

SIGNALS

	ZR	14633	
	NR	14931	
	CR	30206	
	HR	35911	
CARBON	7.285%		
HYDROGEN	0.805%		
NITROGEN	0.993%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	11/18/2016 2:14:58 PM	P_ID	111816CM
SAMPLE ID	163649102	USER ID	mansfield_toc1
WEIGHT (mg)	8.690	MODE	CHN

SIGNALS

	ZR	14613	
	NR	14861	
	CR	27591	
	HR	32226	
CARBON	9.912%		
HYDROGEN	1.001%		
NITROGEN	1.221%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	11/18/2016 2:19:38 PM	P_ID	111816CM
SAMPLE ID	163649103	USER ID	mansfield_toc1
WEIGHT (mg)	10.690	MODE	CHN

SIGNALS

	ZR	14611	
	NR	14932	
	CR	26877	
	HR	31672	
CARBON	7.558%		
HYDROGEN	0.852%		
NITROGEN	1.469%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	11/18/2016 2:24:18 PM	P_ID	111816CM
SAMPLE ID	163649103	USER ID	mansfield_toc1
WEIGHT (mg)	11.980	MODE	CHN

SIGNALS

	ZR	14628	
	NR	15007	
	CR	28906	
	HR	34370	
CARBON	7.854%		
HYDROGEN	0.903%		
NITROGEN	1.648%		

BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	11/18/2016 2:28:57 PM	P_ID	111816CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.330	MODE	CHN

SIGNALS			
		ZR	14622
CARBON	1.007%	NR	14699
HYDROGEN	4.126%	CR	16298
NITROGEN	-.128%	HR	34194
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	11/18/2016 2:33:37 PM	P_ID	111816CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	47.910	MODE	CHN

SIGNALS			
		ZR	14641
CARBON	-.004%	NR	14714
HYDROGEN	-.027%	CR	14756
NITROGEN	-.034%	HR	15488
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	11/18/2016 3:17:18 PM	P_ID	111816CM
SAMPLE ID	163649101	USER ID	mansfield_toc1
WEIGHT (mg)	11.120	MODE	CHN

SIGNALS			
		ZR	14594
CARBON	14.003%	NR	15101
HYDROGEN	1.442%	CR	38058
NITROGEN	2.579%	HR	45564
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	23 Seconds		

DATE & TIME	11/18/2016 3:21:56 PM	P_ID	111816CM
SAMPLE ID	163649101	USER ID	mansfield_toc1
WEIGHT (mg)	9.120	MODE	CHN

				SIGNALS
				ZR 14606
CARBON	14.576%			NR 15043
HYDROGEN	1.439%			CR 34652
NITROGEN	2.609%			HR 41017
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	20 Seconds			

DATE & TIME	11/18/2016 3:26:35 PM	P_ID	111816CM
SAMPLE ID	163649102	USER ID	mansfield_toc1
WEIGHT (mg)	5.570	MODE	CHN

				SIGNALS
				ZR 14583
CARBON	10.287%			NR 14776
HYDROGEN	0.844%			CR 23268
NITROGEN	1.215%			HR 26341
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	20 Seconds			

DATE & TIME	11/18/2016 3:31:14 PM	P_ID	111816CM
SAMPLE ID	163649102	USER ID	mansfield_toc1
WEIGHT (mg)	14.060	MODE	CHN

				SIGNALS
				ZR 14602
CARBON	9.378%			NR 14946
HYDROGEN	1.003%			CR 34395
NITROGEN	1.231%			HR 41143
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	20 Seconds			

DATE & TIME	11/18/2016 3:35:53 PM	P_ID	111816CM
SAMPLE ID	163649104	USER ID	mansfield_toc1
WEIGHT (mg)	7.150	MODE	CHN

				SIGNALS
				ZR 14610
CARBON	-.048%			NR 14666
HYDROGEN	-.401%			CR 14686
NITROGEN	-.390%			HR 14801
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	21 Seconds			



DATE & TIME	11/18/2016 3:40:32 PM	P_ID	111816CM
SAMPLE ID	163649104	USER ID	mansfield_toc1
WEIGHT (mg)	7.780	MODE	CHN

SIGNALS

		ZR	14594
		NR	14871
		CR	27346
		HR	31501
CARBON	10.848%		
HYDROGEN	0.960%		
NITROGEN	1.624%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	20 Seconds		

DATE & TIME	11/18/2016 3:45:10 PM	P_ID	111816CM
SAMPLE ID	163649105	USER ID	mansfield_toc1
WEIGHT (mg)	5.090	MODE	CHN

SIGNALS

		ZR	14600
		NR	14673
		CR	14974
		HR	15896
CARBON	0.309%		
HYDROGEN	-.158%		
NITROGEN	-.315%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	20 Seconds		

DATE & TIME	11/18/2016 3:49:49 PM	P_ID	111816CM
SAMPLE ID	163649105	USER ID	mansfield_toc1
WEIGHT (mg)	10.240	MODE	CHN

SIGNALS

		ZR	14612
		NR	14706
		CR	15491
		HR	17439
CARBON	0.475%		
HYDROGEN	0.178%		
NITROGEN	-.014%		
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	20 Seconds		

DATE & TIME	11/18/2016 3:54:27 PM	P_ID	111816CM
SAMPLE ID	163649106	USER ID	mansfield_toc1
WEIGHT (mg)	9.310	MODE	CHN

SIGNALS

		ZR	14597
		NR	14900
		CR	27283
		HR	31699
CARBON	8.998%		
HYDROGEN	0.874%		
NITROGEN	1.552%		

BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	20 Seconds		

DATE & TIME	11/18/2016 3:59:06 PM	P_ID	111816CM
SAMPLE ID	163649106	USER ID	mansfield_toc1
WEIGHT (mg)	7.930	MODE	CHN

SIGNALS

ZR	14621
NR	14872
CR	25166
HR	28872

CARBON	8.772%
HYDROGEN	0.797%
NITROGEN	1.364%
BLANKS	70 1236 96
K FACTORS	14.698 39.092 1.433
FILL	COMB BOOST1 BOOST2
0	0 0 0
FILL TIME	20 Seconds

DATE & TIME	11/18/2016 4:29:41 PM	P_ID	111816CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.560	MODE	CHN

SIGNALS

ZR	14621
NR	14695
CR	16283
HR	34750

CARBON	0.978%
HYDROGEN	4.174%
NITROGEN	-.145%
BLANKS	70 1236 96
K FACTORS	14.698 39.092 1.433
FILL	COMB BOOST1 BOOST2
0	0 0 0
FILL TIME	21 Seconds

DATE & TIME	11/18/2016 4:34:25 PM	P_ID	111816CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	64.320	MODE	CHN

SIGNALS

ZR	14655
NR	14715
CR	14748
HR	15584

CARBON	-.004%
HYDROGEN	-.016%
NITROGEN	-.039%
BLANKS	70 1236 96
K FACTORS	14.698 39.092 1.433
FILL	COMB BOOST1 BOOST2
0	0 0 0
FILL TIME	25 Seconds

DATE & TIME	11/18/2016 4:47:08 PM	P_ID	111816CM
SAMPLE ID	163649104	USER ID	mansfield_toc1
WEIGHT (mg)	8.100	MODE	CHN

				SIGNALS
				ZR 14635
CARBON	11.762%			NR 14944
HYDROGEN	1.318%			CR 29017
NITROGEN	1.835%			HR 34425
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	31 Seconds			

DATE & TIME	11/18/2016 4:52:43 PM	P_ID	111816CM
SAMPLE ID	163649104	USER ID	mansfield_toc1
WEIGHT (mg)	11.490	MODE	CHN

				SIGNALS
				ZR 14729
CARBON	10.069%			NR 15041
HYDROGEN	1.222%			CR 32116
NITROGEN	1.312%			HR 38840
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	78 Seconds			

DATE & TIME	11/18/2016 4:58:59 PM	P_ID	111816CM
SAMPLE ID	163649105	USER ID	mansfield_toc1
WEIGHT (mg)	14.860	MODE	CHN

				SIGNALS
				ZR 14798
CARBON	0.404%			NR 14913
HYDROGEN	0.370%			CR 15866
NITROGEN	0.089%			HR 19251
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	118 Seconds			

DATE & TIME	11/18/2016 5:03:56 PM	P_ID	111816CM
SAMPLE ID	163649105	USER ID	mansfield_toc1
WEIGHT (mg)	10.910	MODE	CHN

				SIGNALS
				ZR 14646
CARBON	0.278%			NR 14850
HYDROGEN	0.291%			CR 15365
NITROGEN	0.691%			HR 17841
BLANKS	70	1236	96	
K FACTORS	14.698	39.092	1.433	
FILL	COMB	BOOST1	BOOST2	
0	0	0	0	
FILL TIME	38 Seconds			

DATE & TIME	11/19/2016 10:44:39 AM	P_ID	111816CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.210	MODE	CHN

SIGNALS

		ZR	14594
CARBON	0.919%	NR	14456
HYDROGEN	3.408%	CR	15905
NITROGEN	-1.599%	HR	30745
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	28 Seconds		

DATE & TIME	11/19/2016 10:49:26 AM	P_ID	111816CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	64.140	MODE	CHN

SIGNALS

		ZR	14606
CARBON	-.006%	NR	14626
HYDROGEN	-.022%	CR	14638
NITROGEN	-.083%	HR	15315
BLANKS	70	1236	96
K FACTORS	14.698	39.092	1.433
FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	28 Seconds		

Date of report 11/22/2016 10:24:31AM

User ID Alpha Analytical

DATE & TIME 11/21/2016 9:41:22 AM P\_ID 112116CM  
RUN TYPE K1 USER ID alpha  
WEIGHT (mg) 10.330 MODE CHN

SIGNALS

ZR 26387 AVERAGE RESULTS  
NR 29251 KC 19.848  
CR 31343 KH 0.022  
HR 31307 KN 1.634  
BLANKS 65 -39 39  
K FACTORS 1.0% 5.03% 11.67%  
FILL TIME 26 Seconds

DATE & TIME 11/21/2016 9:46:12 AM P\_ID 112116CM  
RUN TYPE BLANK USER ID alpha  
MODE CHN

SIGNALS

ZR 26304 AVERAGE RESULTS  
NR 26924 CARBON 48  
CR 26955 HYDROGEN -38  
HR 26919 NITROGEN 39  
FILL TIME 26 Seconds

DATE & TIME 11/21/2016 9:51:02 AM P\_ID 112116CM  
SAMPLE ID 0 USER ID alpha  
WEIGHT (mg) 9.940 MODE CHN

SIGNALS

ZR 26283  
NR 26484  
CR 26508  
HR 26488  
BLANKS 48 -38 39  
K FACTORS 19.848 0.022 1.634  
FILL COMB BOOST1 BOOST2  
1 2 1 1  
FILL TIME 27 Seconds

DATE & TIME 11/21/2016 9:55:54 AM P\_ID 112116CM  
SAMPLE ID 1000 USER ID alpha  
WEIGHT (mg) 10.110 MODE CHN

SIGNALS

ZR 26261  
NR 26367  
CR 26591  
HR 26579  
BLANKS 48 -38 39  
K FACTORS 19.848 0.022 1.634  
FILL COMB BOOST1 BOOST2  
1 2 1 1  
FILL TIME 28 Seconds

DATE & TIME	11/21/2016 10:00:53 AM	P_ID	112116CM
SAMPLE ID	5000	USER ID	alpha
WEIGHT (mg)	10.320	MODE	CHN

SIGNALS

		ZR	26257
CARBON	0.484%	NR	26331
HYDROGEN	13.654%	CR	27370
NITROGEN	0.208%	HR	27363
BLANKS	48	-38	39
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	36 Seconds		

DATE & TIME	11/21/2016 10:05:51 AM	P_ID	112116CM
SAMPLE ID	10000	USER ID	alpha
WEIGHT (mg)	10.480	MODE	CHN

SIGNALS

		ZR	26244
CARBON	0.974%	NR	26311
HYDROGEN	5.638%	CR	28385
NITROGEN	0.164%	HR	28360
BLANKS	48	-38	39
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	35 Seconds		

DATE & TIME	11/21/2016 10:10:49 AM	P_ID	112116CM
SAMPLE ID	20000	USER ID	alpha
WEIGHT (mg)	10.310	MODE	CHN

SIGNALS

		ZR	26248
CARBON	2.060%	NR	26314
HYDROGEN	10.140%	CR	30577
NITROGEN	0.160%	HR	30562
BLANKS	48	-38	39
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	34 Seconds		

DATE & TIME	11/21/2016 10:15:39 AM	P_ID	112116CM
SAMPLE ID	40000	USER ID	alpha
WEIGHT (mg)	10.340	MODE	CHN

SIGNALS

		ZR	26268
CARBON	2.939%	NR	26317
HYDROGEN	20.661%	CR	32397
NITROGEN	0.059%	HR	32406

BLANKS	48	-38	39
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 10:23:17 AM	P_ID	112116CM
SAMPLE ID	40000	USER ID	alpha
WEIGHT (mg)	10.710	MODE	CHN

SIGNALS			
	ZR	26294	
CARBON	3.879%	NR	26336
HYDROGEN	7.639%	CR	34630
NITROGEN	0.017%	HR	34610
BLANKS	48	-38	39
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 10:28:07 AM	P_ID	112116CM
SAMPLE ID	1000	USER ID	alpha
WEIGHT (mg)	10.160	MODE	CHN

SIGNALS			
	ZR	26291	
CARBON	0.094%	NR	26336
HYDROGEN	3.579%	CR	26574
NITROGEN	0.036%	HR	26544
BLANKS	48	-38	39
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 10:37:18 AM	P_ID	112116CM
SAMPLE ID	ICV	USER ID	alpha
WEIGHT (mg)	10.410	MODE	CHN

SIGNALS			
	ZR	26308	
CARBON	1.001%	NR	26355
HYDROGEN	9.606%	CR	28471
NITROGEN	0.047%	HR	28455
BLANKS	48	-38	39
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 10:42:09 AM	P_ID	112116CM
SAMPLE ID	ICB	USER ID	alpha
WEIGHT (mg)	51.460	MODE	CHN

				SIGNALS
				ZR 26281
CARBON	0.0%			NR 26328
HYDROGEN	2.032%			CR 26375
NITROGEN	0.010%			HR 26360
BLANKS	48	-38	39	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 10:47:12 AM	P_ID	112116CM
SAMPLE ID	HICV	USER ID	alpha
WEIGHT (mg)	52.080	MODE	CHN

				SIGNALS
				ZR 26303
CARBON	3.805%			NR 26347
HYDROGEN	6.109%			CR 65727
NITROGEN	0.006%			HR 65759
BLANKS	48	-38	39	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	31 Seconds			

DATE & TIME	11/21/2016 10:52:02 AM	P_ID	112116CM
SAMPLE ID	SRM1944	USER ID	alpha
WEIGHT (mg)	12.870	MODE	CHN

				SIGNALS
				ZR 26314
CARBON	4.409%			NR 26566
HYDROGEN	1265.099%			CR 37876
NITROGEN	1.013%			HR 41420
BLANKS	48	-38	39	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	26 Seconds			

DATE & TIME	11/21/2016 10:56:52 AM	P_ID	112116CM
SAMPLE ID	MB	USER ID	alpha
WEIGHT (mg)	60.390	MODE	CHN

				SIGNALS
				ZR 26257
CARBON	0.004%			NR 26298
HYDROGEN	0.978%			CR 26394
NITROGEN	0.002%			HR 26369
BLANKS	48	-38	39	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			



DATE & TIME	11/21/2016 11:01:42 AM	P_ID	112116CM
RUN TYPE	BLANK	USER ID	alpha
		MODE	CHN
		SIGNALS	
		ZR	26261
		NR	26303
		CR	26294
		HR	26283
		AVERAGE RESULTS	
CARBON	-9		CARBON 19
HYDROGEN	-11		HYDROGEN -25
NITROGEN	42		NITROGEN 40
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 11:06:33 AM	P_ID	112116CM
SAMPLE ID	SRM1944	USER ID	alpha
WEIGHT (mg)	11.820	MODE	CHN
		SIGNALS	
		ZR	26273
		NR	26527
		CR	37760
		HR	37777
CARBON	4.780%		
HYDROGEN	16.151%		
NITROGEN	1.108%		
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 11:11:23 AM	P_ID	112116CM
SAMPLE ID	MB	USER ID	alpha
WEIGHT (mg)	45.150	MODE	CHN
		SIGNALS	
		ZR	26286
		NR	26326
		CR	26452
		HR	26446
CARBON	0.012%		
HYDROGEN	1.913%		
NITROGEN	0.0%		
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 11:16:14 AM	P_ID	112116CM
SAMPLE ID	163649107	USER ID	alpha
WEIGHT (mg)	16.400	MODE	CHN
		SIGNALS	
		ZR	26289
		NR	26476
		CR	34562
		HR	34576
CARBON	2.478%		
HYDROGEN	10.809%		
NITROGEN	0.549%		
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1

FILL TIME 27 Seconds

DATE & TIME	11/21/2016 11:21:04 AM	P_ID	112116CM
SAMPLE ID	163649107	USER ID	alpha
WEIGHT (mg)	15.590	MODE	CHN

SIGNALS			
	ZR	26302	
CARBON	4.291%	NR	26485
HYDROGEN	14.287%	CR	39782
NITROGEN	0.561%	HR	39806
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 11:25:55 AM	P_ID	112116CM
SAMPLE ID	163649108	USER ID	alpha
WEIGHT (mg)	12.960	MODE	CHN

SIGNALS			
	ZR	26315	
CARBON	7.875%	NR	26570
HYDROGEN	10.873%	CR	46846
NITROGEN	1.015%	HR	46852
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 11:30:45 AM	P_ID	112116CM
SAMPLE ID	163649108	USER ID	alpha
WEIGHT (mg)	11.060	MODE	CHN

SIGNALS			
	ZR	26331	
CARBON	4.380%	NR	26520
HYDROGEN	5.343%	CR	36153
NITROGEN	0.824%	HR	36141
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 11:43:08 AM	P_ID	112116CM
SAMPLE ID	163649107	USER ID	alpha
WEIGHT (mg)	12.590	MODE	CHN

SIGNALS	
ZR	26343

CARBON	2.257%		NR	26526
HYDROGEN	5.416%		CR	32186
NITROGEN	0.695%		HR	32176
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	35 Seconds			

DATE & TIME	11/21/2016 11:48:08 AM	P_ID	112116CM
SAMPLE ID	163649107	USER ID	alpha
WEIGHT (mg)	7.020	MODE	CHN

SIGNALS

ZR	26351
NR	26473
CR	30269
HR	30264
BLANKS	19 -25 40
K FACTORS	19.848 0.022 1.634
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	36 Seconds

DATE & TIME	11/21/2016 11:53:06 AM	P_ID	112116CM
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.270	MODE	CHN

SIGNALS

ZR	26344
NR	26398
CR	28584
HR	28554
BLANKS	19 -25 40
K FACTORS	19.848 0.022 1.634
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	35 Seconds

DATE & TIME	11/21/2016 11:58:04 AM	P_ID	112116CM
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	60.500	MODE	CHN

SIGNALS

ZR	26315
NR	26371
CR	26427
HR	26397
BLANKS	19 -25 40
K FACTORS	19.848 0.022 1.634
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	34 Seconds

DATE & TIME	11/21/2016 12:25:38 PM	P_ID	112116CM
SAMPLE ID	163649108	USER ID	alpha
WEIGHT (mg)	13.340	MODE	CHN

SIGNALS			
	ZR	26369	
CARBON	4.792%	NR	26616
HYDROGEN	9.881%	CR	39322
NITROGEN	0.950%	HR	39326
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 12:30:29 PM	P_ID	112116CM
SAMPLE ID	163649108	USER ID	alpha
WEIGHT (mg)	11.890	MODE	CHN

SIGNALS			
	ZR	26334	
CARBON	4.310%	NR	26581
HYDROGEN	14.527%	CR	36771
NITROGEN	1.065%	HR	36784
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	11/21/2016 12:35:20 PM	P_ID	112116CM
SAMPLE ID	163660201	USER ID	alpha
WEIGHT (mg)	9.270	MODE	CHN

SIGNALS			
	ZR	26325	
CARBON	2.793%	NR	26474
HYDROGEN	13.239%	CR	31632
NITROGEN	0.720%	HR	31634
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 12:40:11 PM	P_ID	112116CM
SAMPLE ID	163660201	USER ID	alpha
WEIGHT (mg)	10.900	MODE	CHN

SIGNALS			
	ZR	26322	
CARBON	2.894%	NR	26502
HYDROGEN	28.357%	CR	32781
NITROGEN	0.786%	HR	32824
BLANKS	19	-25	40

K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 27 Seconds

DATE & TIME 11/21/2016 12:45:01 PM P\_ID 112116CM  
 SAMPLE ID 163660202 USER ID alpha  
 WEIGHT (mg) 7.610 MODE CHN

SIGNALS  
 ZR 26322  
 CARBON 3.373% NR 26467  
 HYDROGEN 22.100% CR 31581  
 NITROGEN 0.844% HR 31593  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 27 Seconds

DATE & TIME 11/21/2016 12:49:52 PM P\_ID 112116CM  
 SAMPLE ID 163660202 USER ID alpha  
 WEIGHT (mg) 13.140 MODE CHN

SIGNALS  
 ZR 26329  
 CARBON 3.583% NR 26538  
 HYDROGEN 6.573% CR 35902  
 NITROGEN 0.787% HR 35896  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 27 Seconds

DATE & TIME 11/21/2016 12:54:42 PM P\_ID 112116CM  
 SAMPLE ID 163660203 USER ID alpha  
 WEIGHT (mg) 9.890 MODE CHN

SIGNALS  
 ZR 26336  
 CARBON 7.568% NR 26715  
 HYDROGEN 12.869% CR 41589  
 NITROGEN 2.098% HR 41592  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 27 Seconds

DATE & TIME 11/21/2016 12:59:33 PM P\_ID 112116CM  
 SAMPLE ID 163660203 USER ID alpha  
 WEIGHT (mg) 6.700 MODE CHN

				SIGNALS
				ZR 26340
CARBON	7.461%			NR 26608
HYDROGEN	10.176%			CR 36549
NITROGEN	2.083%			HR 36539
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 1:04:23 PM	P_ID	112116CM
SAMPLE ID	163660204	USER ID	alpha
WEIGHT (mg)	9.610	MODE	CHN

				SIGNALS
				ZR 26347
CARBON	7.952%			NR 26713
HYDROGEN	15.136%			CR 41899
NITROGEN	2.076%			HR 41906
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 1:09:14 PM	P_ID	112116CM
SAMPLE ID	163660204	USER ID	alpha
WEIGHT (mg)	7.560	MODE	CHN

				SIGNALS
				ZR 26355
CARBON	7.207%			NR 26635
HYDROGEN	16.835%			CR 37468
NITROGEN	1.943%			HR 37471
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 2:19:45 PM	P_ID	112116CM
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.530	MODE	CHN

				SIGNALS
				ZR 26334
CARBON	1.036%			NR 26582
HYDROGEN	3.885%			CR 28766
NITROGEN	1.209%			HR 28750
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	35 Seconds			

DATE & TIME	11/21/2016 2:24:44 PM	P_ID	112116CM
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	62.200	MODE	CHN

SIGNALS

		ZR	26291
CARBON	0.001%	NR	26359
HYDROGEN	0.365%	CR	26386
NITROGEN	0.028%	HR	26366
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	35 Seconds		

DATE & TIME	11/21/2016 2:30:55 PM	P_ID	112116CM
SAMPLE ID	163660201D	USER ID	alpha
WEIGHT (mg)	11.730	MODE	CHN

SIGNALS

		ZR	26276
CARBON	2.179%	NR	26445
HYDROGEN	12.400%	CR	31538
NITROGEN	0.673%	HR	31545
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 2:35:46 PM	P_ID	112116CM
SAMPLE ID	163660201D	USER ID	alpha
WEIGHT (mg)	10.910	MODE	CHN

SIGNALS

		ZR	26266
CARBON	4.871%	NR	26452
HYDROGEN	3.750%	CR	37019
NITROGEN	0.819%	HR	37003
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 2:40:36 PM	P_ID	112116CM
SAMPLE ID	163660201MS	USER ID	alpha
WEIGHT (mg)	15.050	MODE	CHN

SIGNALS

		ZR	26280
CARBON	4.496%	NR	26500
HYDROGEN	5.436%	CR	39950
NITROGEN	0.732%	HR	39943

BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 2:45:27 PM	P_ID	112116CM
SAMPLE ID	163660201MS	USER ID	alpha
WEIGHT (mg)	7.100	MODE	CHN

SIGNALS

ZR	26280
NR	26448
CR	37162
HR	37154

CARBON	7.589%
HYDROGEN	10.883%
NITROGEN	1.103%
BLANKS	19 -25 40
K FACTORS	19.848 0.022 1.634
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	27 Seconds

DATE & TIME	11/21/2016 2:50:18 PM	P_ID	112116CM
SAMPLE ID	163660201MSD	USER ID	alpha
WEIGHT (mg)	16.130	MODE	CHN

SIGNALS

ZR	26266
NR	26475
CR	35728
HR	35717

CARBON	2.884%
HYDROGEN	3.945%
NITROGEN	0.641%
BLANKS	19 -25 40
K FACTORS	19.848 0.022 1.634
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	27 Seconds

DATE & TIME	11/21/2016 2:55:08 PM	P_ID	112116CM
SAMPLE ID	163660201MSD	USER ID	alpha
WEIGHT (mg)	11.090	MODE	CHN

SIGNALS

ZR	26264
NR	26476
CR	39124
HR	39126

CARBON	5.737%
HYDROGEN	11.066%
NITROGEN	0.949%
BLANKS	19 -25 40
K FACTORS	19.848 0.022 1.634
FILL	COMB BOOST1 BOOST2
1	2 1 1
FILL TIME	27 Seconds

DATE & TIME	11/21/2016 2:59:59 PM	P_ID	112116CM
SAMPLE ID	163660205	USER ID	alpha
WEIGHT (mg)	12.010	MODE	CHN



				SIGNALS
				ZR 26252
CARBON	7.591%			NR 26681
HYDROGEN	17.788%			CR 44794
NITROGEN	1.982%			HR 44816
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 3:04:49 PM	P_ID	112116CM
SAMPLE ID	163660205	USER ID	alpha
WEIGHT (mg)	10.440	MODE	CHN

				SIGNALS
				ZR 26258
CARBON	6.668%			NR 26622
HYDROGEN	20.899%			CR 40457
NITROGEN	1.899%			HR 40480
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 3:09:40 PM	P_ID	112116CM
SAMPLE ID	163660206	USER ID	alpha
WEIGHT (mg)	9.180	MODE	CHN

				SIGNALS
				ZR 26272
CARBON	8.665%			NR 26636
HYDROGEN	23.767%			CR 42443
NITROGEN	2.160%			HR 42466
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 3:14:30 PM	P_ID	112116CM
SAMPLE ID	163660206	USER ID	alpha
WEIGHT (mg)	6.190	MODE	CHN

				SIGNALS
				ZR 26272
CARBON	8.659%			NR 26532
HYDROGEN	34.513%			CR 37189
NITROGEN	2.175%			HR 37211
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/21/2016 3:40:43 PM	P_ID	112116CM
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.310	MODE	CHN

SIGNALS

		ZR	26275
CARBON	1.045%	NR	26339
HYDROGEN	16.312%	CR	28496
NITROGEN	0.142%	HR	28508
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 3:45:33 PM	P_ID	112116CM
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	81.380	MODE	CHN

SIGNALS

		ZR	26238
CARBON	0.002%	NR	26279
HYDROGEN	1.620%	CR	26332
NITROGEN	0.001%	HR	26336
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 3:51:33 PM	P_ID	112116CM
SAMPLE ID	163660201D	USER ID	alpha
WEIGHT (mg)	7.450	MODE	CHN

SIGNALS

		ZR	26228
CARBON	2.493%	NR	26391
HYDROGEN	9.152%	CR	30097
NITROGEN	1.010%	HR	30087
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	35 Seconds		

DATE & TIME	11/21/2016 3:56:32 PM	P_ID	112116CM
SAMPLE ID	163660201D	USER ID	alpha
WEIGHT (mg)	15.320	MODE	CHN

SIGNALS

		ZR	26234
CARBON	3.545%	NR	26502
HYDROGEN	11.868%	CR	37299
NITROGEN	0.911%	HR	37314

BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 36 Seconds

DATE & TIME 11/21/2016 4:01:30 PM P\_ID 112116CM  
 SAMPLE ID 163660201MS USER ID alpha  
 WEIGHT (mg) 13.020 MODE CHN

SIGNALS

ZR 26229  
 NR 26438  
 CR 35161  
 HR 35144  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 35 Seconds

DATE & TIME 11/21/2016 4:06:28 PM P\_ID 112116CM  
 SAMPLE ID 163660201MS USER ID alpha  
 WEIGHT (mg) 13.760 MODE CHN

SIGNALS

ZR 26216  
 NR 26442  
 CR 36568  
 HR 36560  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 34 Seconds

DATE & TIME 11/21/2016 4:11:23 PM P\_ID 112116CM  
 SAMPLE ID 163660201MSD USER ID alpha  
 WEIGHT (mg) 11.570 MODE CHN

SIGNALS

ZR 26226  
 NR 26411  
 CR 36819  
 HR 36827  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 32 Seconds

DATE & TIME 11/21/2016 4:16:17 PM P\_ID 112116CM  
 SAMPLE ID 163660201MSD USER ID alpha  
 WEIGHT (mg) 13.960 MODE CHN

				SIGNALS
				ZR 26218
CARBON	3.754%			NR 26439
HYDROGEN	9.768%			CR 36860
NITROGEN	0.793%			HR 36865
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	30 Seconds			

DATE & TIME	11/21/2016 4:21:08 PM	P_ID	112116CM
SAMPLE ID	163660207	USER ID	alpha
WEIGHT (mg)	10.090	MODE	CHN

				SIGNALS
				ZR 26205
CARBON	10.028%			NR 26648
HYDROGEN	23.426%			CR 46750
NITROGEN	2.444%			HR 46777
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	28 Seconds			

DATE & TIME	11/21/2016 4:26:00 PM	P_ID	112116CM
SAMPLE ID	163660207	USER ID	alpha
WEIGHT (mg)	7.380	MODE	CHN

				SIGNALS
				ZR 26211
CARBON	10.272%			NR 26543
HYDROGEN	25.253%			CR 41608
NITROGEN	2.421%			HR 41624
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	28 Seconds			

DATE & TIME	11/21/2016 4:30:52 PM	P_ID	112116CM
SAMPLE ID	163660208	USER ID	alpha
WEIGHT (mg)	5.740	MODE	CHN

				SIGNALS
				ZR 26209
CARBON	9.955%			NR 26480
HYDROGEN	31.676%			CR 37841
NITROGEN	2.463%			HR 37856
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	28 Seconds			

DATE & TIME	11/21/2016 4:35:45 PM	P_ID	112116CM
SAMPLE ID	163660208	USER ID	alpha
WEIGHT (mg)	8.740	MODE	CHN

SIGNALS

		ZR	26226
		NR	26615
		CR	43453
		HR	43475
CARBON	9.696%		
HYDROGEN	24.444%		
NITROGEN	2.444%		
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	30 Seconds		

DATE & TIME	11/21/2016 4:41:09 PM	P_ID	112116CM
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.540	MODE	CHN

SIGNALS

		ZR	26230
		NR	26275
		CR	28517
		HR	28514
CARBON	1.063%		
HYDROGEN	9.488%		
NITROGEN	0.029%		
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	11/21/2016 4:46:00 PM	P_ID	112116CM
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	78.500	MODE	CHN

SIGNALS

		ZR	26210
		NR	26255
		CR	26292
		HR	26282
CARBON	0.001%		
HYDROGEN	0.869%		
NITROGEN	0.004%		
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/21/2016 4:53:44 PM	P_ID	112116CM
SAMPLE ID	163660209	USER ID	alpha
WEIGHT (mg)	5.700	MODE	CHN

SIGNALS

		ZR	26220
		NR	26481
		CR	36597
		HR	36598
CARBON	8.925%		
HYDROGEN	20.734%		
NITROGEN	2.373%		

BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	35 Seconds		

DATE & TIME	11/21/2016 4:58:43 PM	P_ID	112116CM
SAMPLE ID	163660209	USER ID	alpha
WEIGHT (mg)	5.220	MODE	CHN

SIGNALS			
		ZR	26232
CARBON	9.463%	NR	26482
HYDROGEN	31.348%	CR	36305
NITROGEN	2.462%	HR	36316
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	36 Seconds		

DATE & TIME	11/21/2016 5:03:42 PM	P_ID	112116CM
SAMPLE ID	163660210	USER ID	alpha
WEIGHT (mg)	9.120	MODE	CHN

SIGNALS			
		ZR	26219
CARBON	7.588%	NR	26568
HYDROGEN	13.457%	CR	40322
NITROGEN	2.074%	HR	40324
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	35 Seconds		

DATE & TIME	11/21/2016 5:08:40 PM	P_ID	112116CM
SAMPLE ID	163660210	USER ID	alpha
WEIGHT (mg)	8.120	MODE	CHN

SIGNALS			
		ZR	26199
CARBON	7.995%	NR	26530
HYDROGEN	14.554%	CR	39435
NITROGEN	2.193%	HR	39436
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	34 Seconds		

DATE & TIME	11/21/2016 5:13:36 PM	P_ID	112116CM
SAMPLE ID	163660211	USER ID	alpha
WEIGHT (mg)	11.080	MODE	CHN

				SIGNALS
				ZR 26221
CARBON	9.037%			NR 26672
HYDROGEN	15.589%			CR 46565
NITROGEN	2.270%			HR 46578
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	33 Seconds			

DATE & TIME	11/21/2016 5:18:30 PM	P_ID	112116CM
SAMPLE ID	163660211	USER ID	alpha
WEIGHT (mg)	11.290	MODE	CHN

				SIGNALS
				ZR 26236
CARBON	7.456%			NR 26636
HYDROGEN	15.702%			CR 43363
NITROGEN	1.951%			HR 43377
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	31 Seconds			

DATE & TIME	11/21/2016 5:23:23 PM	P_ID	112116CM
SAMPLE ID	163660212	USER ID	alpha
WEIGHT (mg)	11.350	MODE	CHN

				SIGNALS
				ZR 26222
CARBON	10.773%			NR 26668
HYDROGEN	27.233%			CR 50956
NITROGEN	2.189%			HR 50999
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	29 Seconds			

DATE & TIME	11/21/2016 5:28:14 PM	P_ID	112116CM
SAMPLE ID	163660212	USER ID	alpha
WEIGHT (mg)	12.300	MODE	CHN

				SIGNALS
				ZR 26235
CARBON	10.867%			NR 26725
HYDROGEN	23.651%			CR 53274
NITROGEN	2.239%			HR 53313
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	28 Seconds			

DATE & TIME	11/21/2016 5:33:07 PM	P_ID	112116CM
SAMPLE ID	163660213	USER ID	alpha
WEIGHT (mg)	7.330	MODE	CHN

SIGNALS			
	ZR	26232	
CARBON	-0.08%	NR	26282
HYDROGEN	9.922%	CR	26289
NITROGEN	0.083%	HR	26280
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	29 Seconds		

DATE & TIME	11/21/2016 5:37:59 PM	P_ID	112116CM
SAMPLE ID	163660213	USER ID	alpha
WEIGHT (mg)	9.210	MODE	CHN

SIGNALS			
	ZR	26228	
CARBON	19.590%	NR	26785
HYDROGEN	36.522%	CR	62615
NITROGEN	3.435%	HR	62664
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	11/21/2016 5:42:50 PM	P_ID	112116CM
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.040	MODE	CHN

SIGNALS			
	ZR	26242	
CARBON	1.068%	NR	26287
HYDROGEN	9.960%	CR	28435
NITROGEN	0.030%	HR	28432
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	28 Seconds		

DATE & TIME	11/21/2016 5:47:41 PM	P_ID	112116CM
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	66.230	MODE	CHN

SIGNALS			
	ZR	26216	
CARBON	-0.02%	NR	26256
HYDROGEN	1.373%	CR	26249
NITROGEN	0.0%	HR	26244



BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 27 Seconds

DATE & TIME 11/22/2016 9:13:46 AM P\_ID 112116CM  
 SAMPLE ID 163660213 USER ID alpha  
 WEIGHT (mg) 6.780 MODE CHN

SIGNALS  
 ZR 26053  
 CARBON 10.924% NR 27680  
 HYDROGEN 15.420% CR 42399  
 NITROGEN 14.325% HR 42397  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 26 Seconds

DATE & TIME 11/22/2016 9:18:36 AM P\_ID 112116CM  
 SAMPLE ID 163660213 USER ID alpha  
 WEIGHT (mg) 11.890 MODE CHN

SIGNALS  
 ZR 25977  
 CARBON 10.652% NR 26614  
 HYDROGEN 22.173% CR 51770  
 NITROGEN 3.073% HR 51803  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 26 Seconds

DATE & TIME 11/22/2016 9:23:48 AM P\_ID 112116CM  
 SAMPLE ID 163660214 USER ID alpha  
 WEIGHT (mg) 13.440 MODE CHN

SIGNALS  
 ZR 25961  
 CARBON 6.899% NR 26556  
 HYDROGEN 23.674% CR 44978  
 NITROGEN 2.527% HR 45023  
 BLANKS 19 -25 40  
 K FACTORS 19.848 0.022 1.634  
 FILL COMB BOOST1 BOOST2  
 1 2 1 1  
 FILL TIME 26 Seconds

DATE & TIME 11/22/2016 9:28:38 AM P\_ID 112116CM  
 SAMPLE ID 163660214 USER ID alpha  
 WEIGHT (mg) 10.550 MODE CHN

				SIGNALS
				ZR 25955
CARBON	7.362%			NR 26439
HYDROGEN	28.436%			CR 41873
NITROGEN	2.576%			HR 41914
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/22/2016 9:33:28 AM	P_ID	112116CM
SAMPLE ID	163660215	USER ID	alpha
WEIGHT (mg)	7.990	MODE	CHN

				SIGNALS
				ZR 25959
CARBON	6.909%			NR 26298
HYDROGEN	35.840%			CR 37273
NITROGEN	2.290%			HR 37311
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/22/2016 9:38:18 AM	P_ID	112116CM
SAMPLE ID	163660215	USER ID	alpha
WEIGHT (mg)	9.740	MODE	CHN

				SIGNALS
				ZR 25968
CARBON	6.868%			NR 26361
HYDROGEN	30.801%			CR 39658
NITROGEN	2.218%			HR 39699
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/22/2016 9:43:08 AM	P_ID	112116CM
SAMPLE ID	163660216	USER ID	alpha
WEIGHT (mg)	6.290	MODE	CHN

				SIGNALS
				ZR 25973
CARBON	7.462%			NR 26263
HYDROGEN	46.249%			CR 35598
NITROGEN	2.432%			HR 35637
BLANKS	19	-25	40	
K FACTORS	19.848	0.022	1.634	
FILL	COMB	BOOST1	BOOST2	
1	2	1	1	
FILL TIME	27 Seconds			

DATE & TIME	11/22/2016 9:47:58 AM	P_ID	112116CM
SAMPLE ID	163660216	USER ID	alpha
WEIGHT (mg)	6.340	MODE	CHN

SIGNALS

		ZR	25983
CARBON	7.548%	NR	26269
HYDROGEN	46.602%	CR	35786
NITROGEN	2.375%	HR	35826
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/22/2016 9:52:49 AM	P_ID	112116CM
SAMPLE ID	163660217	USER ID	alpha
WEIGHT (mg)	9.500	MODE	CHN

SIGNALS

		ZR	25994
CARBON	6.955%	NR	26363
HYDROGEN	35.885%	CR	39497
NITROGEN	2.119%	HR	39547
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/22/2016 9:57:39 AM	P_ID	112116CM
SAMPLE ID	163660217	USER ID	alpha
WEIGHT (mg)	8.430	MODE	CHN

SIGNALS

		ZR	26008
CARBON	7.266%	NR	26349
HYDROGEN	34.509%	CR	38526
NITROGEN	2.185%	HR	38565
BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

DATE & TIME	11/22/2016 10:02:29 AM	P_ID	112116CM
SAMPLE ID	CCV	USER ID	alpha
WEIGHT (mg)	10.030	MODE	CHN

SIGNALS

		ZR	26028
CARBON	1.047%	NR	26069
HYDROGEN	20.847%	CR	28172
NITROGEN	0.006%	HR	28193

BLANKS	19	-25	40
K FACTORS	19.848	0.022	1.634
FILL	COMB	BOOST1	BOOST2
1	2	1	1
FILL TIME	27 Seconds		

---

DATE & TIME	11/22/2016 10:07:20 AM	P_ID	112116CM
SAMPLE ID	CCB	USER ID	alpha
WEIGHT (mg)	71.290	MODE	CHN

				SIGNALS	
				ZR	26000
CARBON	0.002%			NR	26046
HYDROGEN	1.020%			CR	26098
NITROGEN	0.005%			HR	26089
BLANKS	19	-25	40		
K FACTORS	19.848	0.022	1.634		
FILL	COMB	BOOST1	BOOST2		
1	2	1	1		
FILL TIME	27 Seconds				

---

# **Work Group**

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Dec 01 2016, 11:17 am

Work Group: WG954446 for Department: 7 Wet Chemistry

Created: 21-NOV-16 Due: Operator:

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1636491-01	W-61-HIGH_110816_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
L1636491-02	W-61-INT_110816_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
L1636491-03	W-61-LOW_110816_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
L1636491-04	W-61-MID_110816_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
L1636491-05	W-63-HIGH_110816_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
L1636491-06	W-63-INT_110816_SED	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
WG954446-1	Laboratory Method B1	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG954446-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Dec 01 2016, 11:17 am

Work Group: WG954878 for Department: 7 Wet Chemistry

Created: 22-NOV-16 Due: Operator:

Sample	Client ID	C Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1636491-07	W-63-LOW_110816_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
L1636491-08	W-63-MID_110816_SED_	S A2-TOC-LK-2REPS	SOIL	DONE	U	1122	1205	S0	Plastic-A.120
L1636602-01	BR-HRC-2A-000008	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-02	BR-HRC-DUP-01	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-03	BR-HRC-1-008012	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-04	BR-HRC-1-012016	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-05	BR-HRC-1-016020	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-06	BR-HRC-1-020024	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-07	BR-HRC-1-024028	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-08	BR-HRC-1-028032	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-09	BR-HRC-1-032036	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-10	BR-HRC-1-036040	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-11	BR-HRC-1-040044	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-12	BR-HRC-1-044048	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-13	BR-HRC-1-048054	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-14	BR-HRC-1-000002	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-15	BR-HRC-1-002004	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-16	BR-HRC-1-004006	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
L1636602-17	BR-HRC-1-006008	S A2-TOC-LK-2REPS	SOIL	DONE	U	0928	1205	S0	Glass-A.120
WG954878-1	Laboratory Method Bl	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG954878-2	Standard Reference M	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG954878-3	Duplicate Sample	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG954878-4	Matrix Spike	S A2-TOC-LK-2REPS	SOIL	DONE	U				
WG954878-5	Matrix Spike Duplica	S A2-TOC-LK-2REPS	SOIL	DONE	U				
Comments:									
WG954878-3	L1636602-01								
WG954878-4	L1636602-01								
WG954878-5	L1636602-01								

# Sample Preparation





Date: 11/18/16  
 Analyst: [Signature]

TOC Instrument: #1  
 (Circle one) #2 - SN: 241N8102003  
 SN: 241N9041221

CCV ID: WW102116A-E  
 SRM 1944 ID: WS0818141  
 Filter Aid ID: WS120415A

2° Review: \_\_\_\_\_

ICV ID: WW102116F  
 Balance ID: 002288  
 Other SRM ID: \_\_\_\_\_

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std K				1	10.63
Blank				2	75.74
K Factor				3	10.18
Blank L				4	10.06
K-Factor - 0				5	9.78
K-Factor 1000				6	10.41
ICV 5000				7	10.44
ICV 10000				8	10.35
ICV 20000				9	11.11
Blank L 10000				10	10.57
20000				11	10.43
1000				12	9.97
ICV				13	10.24
ICB				14	63.89
HCV				15	51.68
SRM1650				16	
MB				17	
SRM1650				18	
CCV MB				19	
CCB SRM1650				20	
MB				21	
SRM1650				22	

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
MB				23	
SRM1944				16	11.36
MB				17	86.19
SRM1944				18	8.89
MB				19	79.63
L1636788	18			20	19.41
	18			21	27.09
	19			22	21.53
CCV	19			23	15.07
CCB	20			24	15.66
	20			25	11.15
CCV				26	10.19
CCB				27	70.54
L1636788	20D			28	21.18
	20D			29	16.11
	20MS	10.14		30	17.17
	20MS	10.59		31	17.57
L1636491	01			32	5.13
	01			33	5.73
	02			34	14.20
CCV	02			35	8.69
CCB					

TOC Instrument: #1 - SN: 241N8102003  
(Circle one) #2 - SN: 241N9041221

#3 - SN: 241L1308211

Date: \_\_\_\_\_  
Analyst: \_\_\_\_\_

2° Review: \_\_\_\_\_  
CCV ID: \_\_\_\_\_  
SRM 1944 ID: \_\_\_\_\_  
Filter Aid ID: \_\_\_\_\_

ICV ID: \_\_\_\_\_  
Balance ID: \_\_\_\_\_  
Other SRM ID: \_\_\_\_\_

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor					
Blank					
K Factor					
K Factor					
ICV					
ICB					
LCS					
Blank					
L1636491	03			36	10.69
↓	03			37	11.98
CCV				38	10.33
CCB				39	47.91
	01RR			40	11.12
	01RR			41	9.12
	02RR			42	5.57
	02RR			43	14.06
CCV	04			44	7.15
CCB	04			45	7.78
	05			46	5.09
	05			47	10.24

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
	06			48	9.31
	06			49	7.93
CCV				50	10.56
CCB				51	6.432
L1636491	04RR			52	8.16
↓	04RR			53	11.49
	05RR			54	14.86
	05RR			55	10.91
CCV	07			56	17.21
CCB	07			57	20.67
	08			58	10.20
	08			59	11.63
CCV				60	10.21
CCB				61	6.614
L1636491	06			62	

Document Type: Form

Pre-Qualtrax Document ID: 107-02

TOC Instrument: #1 - SN: 241N8102003  
(Circle one) #2 - SN: 241N9041221

ICV ID: WJW102116A  
Balance ID: WJW102116A  
Other SRM ID: WJW102116F

Date: 11/21/16  
Analyst: CCB

2° Review:

SRM 1944 ID: WJW102116A  
Filter Aid ID: WJW102116A

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning-StdC				1	10.33
Blank				2	35.00
K-Factor 0				3	9.94
Blank 1000				4	10.11
K-Factor 5000				5	10.32
K-Factor 10000				6	10.48
hev 20000				7	10.31
hev 40000				8	10.34
tes 40000				9	10.71
Blank 1000				10	10.16
ICV				11	10.41
ICB				12	51.46
hev				13	52.08
SEMiquy				14	12.87
MB				15	60.39
SEMiquy				16	11.82
MB				17	45.15
L1636491	07			18	16.40
CCV	07			19	15.59
CCB	08			20	12.96
	08			21	11.06
	CTR			22	12.59
				23	

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
	07RR			24	7.02
CCV				25	10.27
CCB				26	60.50
	08RR			27	13.34
	08RR			28	11.89
L163602	01			29	9.27
	01			30	10.90
	02			31	7.61
CCV	02			32	13.14
seB	03			33	9.89
	03			34	6.70
	04			35	9.61
	04			36	7.56
CCV				37	10.53
CCB				38	62.20
	01D			39	11.73
	01D			40	10.91
	01MS	10.10		41	15.05
	01MS	10.16		42	7.10
	01MS	10.01		43	16.13
CCV	01MS	9.87		44	11.09
CCB					

TOC Instrument: #1 - SN: 241N8102003 #3 - SN: 241L1308211  
 (Circle one) #2 - SN: 241N9041221

Date: \_\_\_\_\_ ICV ID: \_\_\_\_\_  
 Analyst: \_\_\_\_\_ SRM 1944 ID: \_\_\_\_\_ Balance ID: \_\_\_\_\_  
 2° Review: \_\_\_\_\_ Filter Aid ID: \_\_\_\_\_ Other SRM ID: \_\_\_\_\_

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
Conditioning Std					
Blank					
K Factor					
Blank					
K Factor					
K Factor					
ICV					
ICB					
LCS					
Blank					
L1636602	05			46	12.01
	05			46	10.44
	04			47	9.18
	04			48	6.19
CCV				49	10.31
CCB				50	8.38
L1636602	01D RL			51	7.45
	01D RL			52	15.32
CCV	01MSRL-10.18			53	13.02
CCB	01MSRL-10.15			54	13.76
	01MSRL-10.12			55	11.57
	01MSRL-70.00			56	13.96

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
L1636602	07			57	10.09
	07			58	7.38
	08			59	5.74
	08			60	8.74
CCV				01	10.54
CCB				02	78.50
L1636602	09			03	5.70
	09			04	5.22
CCV	10			05	9.12
CCB	10			06	8.12
	11			07	11.08
	11			08	11.29
	12			09	11.35
	12			10	12.30
	13			11	7.33
	13			12	9.21
CCV				13	10.04
CCB				14	66.23
L1636602	BRK			15	6.78
	BRK			16	11.89
CCV	14			17	13.44
CCB	14			18	10.55



# Alpha Report



## ANALYTICAL REPORT

Lab Number:	L1636491
Client:	AMEC Foster Wheeler E & I, Inc. 511 Congress Street P.O. Box 7050 Portland, ME 04112-7050
ATTN:	Rod Pendleton
Phone:	(207) 828-3692
Project Name:	USDC PENOBSCOT
Project Number:	3616166052.04.04
Report Date:	11/23/16

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1636491-01	W-61-HIGH_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 14:30	11/10/16
L1636491-02	W-61-INT_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 13:30	11/10/16
L1636491-03	W-61-LOW_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 14:00	11/10/16
L1636491-04	W-61-MID_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 14:15	11/10/16
L1636491-05	W-63-HIGH_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 16:10	11/10/16
L1636491-06	W-63-INT_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 16:40	11/10/16
L1636491-07	W-63-LOW_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 16:30	11/10/16
L1636491-08	W-63-MID_110816_SED_03	SEDIMENT	WINTERPORT, ME	11/08/16 16:20	11/10/16



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16


**Case Narrative (continued)**

Total Organic Carbon

L1636491-05: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with confirming results. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 11/23/16

# **INORGANICS & MISCELLANEOUS**

**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-01  
**Client ID:** W-61-HIGH\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 14:30  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	15.5		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
Total Organic Carbon (Rep2)	16.1		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	30.9		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-02  
**Client ID:** W-61-INT\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 13:30  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	11.4		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
Total Organic Carbon (Rep2)	10.4		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	27.8		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-03  
**Client ID:** W-61-LOW\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 14:00  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	8.34		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
Total Organic Carbon (Rep2)	8.68		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	40.6		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-04  
**Client ID:** W-61-MID\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 14:15  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	13.0		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
Total Organic Carbon (Rep2)	11.1		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	39.6		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-05  
**Client ID:** W-63-HIGH\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 16:10  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	0.307		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
Total Organic Carbon (Rep2)	0.508		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	29.5		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP





**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-06  
**Client ID:** W-63-INT\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 16:40  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	9.94		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
Total Organic Carbon (Rep2)	9.68		%	0.050	--	1	-	11/18/16 11:09	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	29.9		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-07  
**Client ID:** W-63-LOW\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 16:30  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	2.29		%	0.050	--	1	-	11/21/16 11:48	13,-	CM
Total Organic Carbon (Rep2)	2.74		%	0.050	--	1	-	11/21/16 11:48	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	50.9		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**SAMPLE RESULTS**

**Lab ID:** L1636491-08  
**Client ID:** W-63-MID\_110816\_SED\_03  
**Sample Location:** WINTERPORT, ME  
**Matrix:** Sediment

**Date Collected:** 11/08/16 16:20  
**Date Received:** 11/10/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab</b>										
Total Organic Carbon (Rep1)	4.88		%	0.050	--	1	-	11/21/16 12:30	13,-	CM
Total Organic Carbon (Rep2)	4.39		%	0.050	--	1	-	11/21/16 12:30	13,-	CM
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	59.5		%	0.100	--	1	-	11/11/16 12:39	121,2540G	SP



Project Name: USDC PENOBSCOT

Lab Number: L1636491

Project Number: 3616166052.04.04

Report Date: 11/23/16

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Organic Carbon - Mansfield Lab for sample(s): 01-06 Batch: WG954446-1</b>									
Total Organic Carbon (Rep1)	ND	%	0.050	--	1	-	11/18/16 11:09	13,-	CM
Total Organic Carbon (Rep2)	ND	%	0.050	--	1	-	11/18/16 11:09	13,-	CM
<b>Total Organic Carbon - Mansfield Lab for sample(s): 07-08 Batch: WG954878-1</b>									
Total Organic Carbon (Rep1)	ND	%	0.050	--	1	-	11/21/16 11:11	13,-	CM
Total Organic Carbon (Rep2)	ND	%	0.050	--	1	-	11/21/16 11:11	13,-	CM

### Matrix Spike Analysis Batch Quality Control

Project Name: USDC PENOBSCOT

Lab Number: L1636491

Project Number: 3616166052.04.04

Report Date: 11/23/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 07-08 QC Batch ID: WG954878-4 WG954878-5 QC Sample: L1636602-01 Client ID: MS Sample												
Total Organic Carbon (Rep1)	2.83	0.782	3.43	77		4.60	202	Q	75-125	29	Q	25
Total Organic Carbon (Rep2)	2.94	0.738	3.77	112		3.82	123		75-125	1		25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: USDC PENOBSCOT

Project Number: 3616166052.04.04

Lab Number: L1636491

Report Date: 11/23/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG951457-1 QC Sample: L1634600-01 Client ID: DUP Sample						
Solids, Total	57.5	58.5	%	2		10
Total Organic Carbon - Mansfield Lab Associated sample(s): 07-08 QC Batch ID: WG954878-3 QC Sample: L1636602-01 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	2.83	2.52	%	12		25
Total Organic Carbon (Rep2)	2.94	3.61	%	20		25

**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

### S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG954446-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	106		75-125
Total Organic Carbon (Rep2)	88		75-125

**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

**S.R.M. Standard Quality Control**

Standard Reference Material (SRM): WG954878-2

<b>Parameter</b>	<b>% Recovery</b>	<b>Qual</b>	<b>QC Criteria</b>
Total Organic Carbon (Rep1)	102		75-125
Total Organic Carbon (Rep2)	111		75-125



Project Name: USDC PENOBSCOT

Project Number: 3616166052.04.04

Lab Number: L1636491

Report Date: 11/23/16

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information Custody Seal****Cooler**

A Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1636491-01A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1636491-02A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1636491-03A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1636491-04A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1636491-05A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1636491-06A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1636491-07A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)
L1636491-08A	Plastic 8oz unpreserved for Grai	A	N/A	3.7	Y	Absent	A2-TOC-LK-2REPS(14),A2-TS(7)

\*Values in parentheses indicate holding time in days



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

#### Data Qualifiers

- reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
  - D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
  - E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
  - G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
  - H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
  - I** - The lower value for the two columns has been reported due to obvious interference.
  - M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
  - NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
  - P** - The RPD between the results for the two columns exceeds the method-specified criteria.
  - Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
  - R** - Analytical results are from sample re-analysis.
  - RE** - Analytical results are from sample re-extraction.
  - S** - Analytical results are from modified screening analysis.
  - J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
  - ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** USDC PENOBSCOT  
**Project Number:** 3616166052.04.04

**Lab Number:** L1636491  
**Report Date:** 11/23/16

## REFERENCES

- 13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

**EPA 624:** m/p-xylene, o-xylene

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

**EPA 300:** DW: Bromide

**EPA 6860:** NPW and SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**EPA 9012B:** NPW: Total Cyanide

**EPA 9050A:** NPW: Specific Conductance

**SM3500:** NPW: Ferrous Iron

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**SM 2540D:** TSS

**EPA 3005A** NPW

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** **EPA 3050B**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

