ALPHA ANALYTICAL

World Class Chemistry

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Lab Number: L1609795

Client: Apex Labs

ATTN: Philip Nerenberg

Project Name: A6D0013

Project Number:

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Sample Delivery Group Information

Sample Delivery Group Form

Laboratory Job number: L1609795
Project Manager: Elizabeth Porta **Review Date:** 04/05/2016
Project Number:
Project Name: A6D0013 **Received:** 04/05/2016 13:28
Client Account: Apex labs **Received by:** BB

Samples Delivered by: UPS **Call Tracker #**
Bill Of Laden Yes **Trackingnum** 1zx4720r1391064522
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 MeOHCovering 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	4.3 - IR Gun	No	No

LIMS Chain of Custody

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Apr 26 2016, 03:59 pm

Login Number: L1609795
Account: APEX-LABS Apex labs
Received: 05APR16 Due Date: 26APR16

Sample #	Client ID	Mat	PR	Collected	Container
L1609795-01	5237-160331-NDP-SED	3	S0	31MAR16 10:35	1-Glass-A.120
| A2-DPKG-FULL Package Due Date: 04/26/16					
A2-DPKG-FULL,A2-SOOT-LK-4REPS					
L1609795-02	5237-160331-NDP-SED	3	S0	31MAR16 10:45	1-Glass-A.120
| Package Due Date: 04/26/16					
A2-SOOT-LK-4REPS					
L1609795-03	5237-160331-NDP-SED	3	S0	31MAR16 11:00	1-Glass-A.120
| Package Due Date: 04/26/16					
A2-SOOT-LK-4REPS					
L1609795-04	5237-160331-NDP-SED	3	S0	31MAR16 11:00	1-Glass-A.120
| Package Due Date: 04/26/16					
A2-SOOT-LK-4REPS					
L1609795-05	5237-160331-NDP-SED	3	S0	31MAR16 11:40	1-Glass-A.120
| Package Due Date: 04/26/16					
A2-SOOT-LK-4REPS					
L1609795-06	5237-160331-NDP-EMB	3	S0	31MAR16 14:40	1-Glass-A.120
| Package Due Date: 04/26/16					
A2-SOOT-LK-4REPS					

Logged By: Elizabeth Porta

Container Tracking

ALPHA ANALYTICAL LABORATORIES
Container Tracking Report

Container ID	Type	Status	Transaction Date	From Response	From Location	From Operator	To Response	To Location	To Operator
L1609795-01A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1609795-01A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-CUSTODY-FRZ1-Z3	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1609795-01A	Glass-A.120	INTACT	05-APR-16	CUSTODY	A2-CUSTODY-REFRIDGE	Bethany Bedard	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Bethany Bedard
L1609795-01A	Glass-A.120	INTACT	05-APR-16	A2-LOGIN	A2-LOGIN	Bethany Bedard	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Bethany Bedard
L1609795-02A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1609795-02A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-CUSTODY-FRZ1-Z3	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1609795-02A	Glass-A.120	INTACT	05-APR-16	CUSTODY	A2-CUSTODY-REFRIDGE	Bethany Bedard	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Bethany Bedard
L1609795-02A	Glass-A.120	INTACT	05-APR-16	A2-LOGIN	A2-LOGIN	Bethany Bedard	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Bethany Bedard
L1609795-03A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1609795-03A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-CUSTODY-FRZ1-Z3	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1609795-03A	Glass-A.120	INTACT	05-APR-16	CUSTODY	A2-CUSTODY-REFRIDGE	Bethany Bedard	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Bethany Bedard
L1609795-03A	Glass-A.120	INTACT	05-APR-16	A2-LOGIN	A2-LOGIN	Bethany Bedard	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Bethany Bedard
L1609795-04A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1609795-04A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-CUSTODY-FRZ1-Z3	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1609795-04A	Glass-A.120	INTACT	05-APR-16	CUSTODY	A2-CUSTODY-REFRIDGE	Bethany Bedard	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Bethany Bedard
L1609795-04A	Glass-A.120	INTACT	05-APR-16	A2-LOGIN	A2-LOGIN	Bethany Bedard	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Bethany Bedard
L1609795-05A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1609795-05A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-CUSTODY-FRZ1-Z3	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1609795-05A	Glass-A.120	INTACT	05-APR-16	CUSTODY	A2-CUSTODY-REFRIDGE	Bethany Bedard	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Bethany Bedard
L1609795-05A	Glass-A.120	INTACT	05-APR-16	A2-LOGIN	A2-LOGIN	Bethany Bedard	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Bethany Bedard
L1609795-06A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-WET CHEMISTRY	Sonal Patel	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Sonal Patel
L1609795-06A	Glass-A.120	INTACT	20-APR-16	CUSTODY	A2-CUSTODY-FRZ1-Z3	Sonal Patel	A2-WET CHEMISTRY	A2-WET CHEMISTRY	Sonal Patel
L1609795-06A	Glass-A.120	INTACT	05-APR-16	CUSTODY	A2-CUSTODY-REFRIDGE	Bethany Bedard	A2-CUSTODY-FRZ1-Z3	A2-CUSTODY-FRZ1-Z3	Bethany Bedard
L1609795-06A	Glass-A.120	INTACT	05-APR-16	A2-LOGIN	A2-LOGIN	Bethany Bedard	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Bethany Bedard

Chain of Custody

KF 4/4/16

SUBCONTRACT ORDER

Apex Laboratories

A6D0013

L1609795

SENDING LABORATORY:

Apex Laboratories
12232 S.W. Garden Place
Tigard, OR 97223
Phone: (503) 718-2323
Fax: (503) 718-0333
Project Manager: Philip Nerenberg

RECEIVING LABORATORY:

Alpha Analytical, INC
320 Forbes Boulevard
Mansfield, MA 02048
Phone :(508) 822-9300
Fax:

609795
-01 **Sample Name: 5237-160331-NDP-SED003** **NDP Sediment-003 (0-0.5)** **Sedimen** **Sampled: 03/31/16 10:35** (A6D0013-02)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 10:35	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (D)4 oz Glass Jar			

-02 **Sample Name: 5237-160331-NDP-SED002** **NDP Sediment-002 (0-0.5)** **Sedimen** **Sampled: 03/31/16 10:45** (A6D0013-04)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 10:45	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

-03 **Sample Name: 5237-160331-NDP-SED001** **NDP Sediment-001 (0-0.5)** **Sedimen** **Sampled: 03/31/16 11:00** (A6D0013-06)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 11:00	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

-04 **Sample Name: 5237-160331-NDP-SED005** **NDP Sediment-005 (0-0.5)** **Sedimen** **Sampled: 03/31/16 11:00** (A6D0013-08)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 11:00	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

Standard TAT

Released By	Date	Received By	Date
	4/4/16	UPS (Shipper)	
UPS (Shipper)			
Released By	Date	Received By	Date
			4/5/16 8:28

SUBCONTRACT ORDER L1609795

Apex Laboratories

A6D0013

NDP Sediment-004(0-0.5)

Sample Name: 5237-160331-NDP-SED004 **Sedimen** **Sampled: 03/31/16 11:40** (A6D0013-10)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 11:40	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

NDP Embankment (0-3.5)

Sample Name: 5237-160331-NDP-EMB001 **Soil** **Sampled: 03/31/16 14:40** (A6D0013-12)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 14:40	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (D)4 oz Glass Jar			

4/4/16

Released By Date

UPS (Shipper)

Received By Date

UPS (Shipper)

Released By Date

Received By Date 4/5/16 13:28

Wet Chemistry

Organic Carbon Analysis

Sequence Logs

Date of report: 4/26/2016 9:18 AM
User ID: mansfield_toc1

	Run Details				Results			Signals			
	Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
⊞	K1	1	10.230	4/25/2016 10:03:21 AM	-194.184	63.820	7.134	1582	4634	3813	24440
	K1	2	10.040	4/25/2016 10:29:03 AM	13.705	22.627	0.177	1534	1708	2917	15650
⊞	K1	3	9.990	4/25/2016 10:43:43 AM	13.874	22.283	0.043	1535	1695	2880	15507
	BLANK	4		4/25/2016 10:49:33 AM	51	1547	110	1537	1553	1708	15487
	K1	5	9.770	4/25/2016 10:54:13 AM	14.698	22.268	0.115	1536	1709	2869	15606
	0	6	10.030	4/25/2016 11:01:28 AM	-.016%	5.066%	2.423%	1537	1554	2747	15510
	1000	7	9.870	4/25/2016 11:06:12 AM	0.068%	5.166%	6.912%	1540	1573	2769	15580
	5000	8	10.290	4/25/2016 11:10:56 AM	0.421%	4.862%	1.272%	1540	1619	2795	15527
	10000	9	10.360	4/25/2016 11:15:39 AM	0.894%	4.901%	10.284%	1540	1699	2891	15627
	20000	10	10.050	4/25/2016 11:20:20 AM	1.667%	4.921%	10.043%	1540	1805	2968	15617
	40000	11	10.920	4/25/2016 11:25:01 AM	3.569%	4.704%	0.257%	1540	2110	3315	15513
	ICV	12	10.060	4/25/2016 11:30:50 AM	0.957%	4.909%	1.301%	1540	1694	2856	15526
	ICB	13	52.750	4/25/2016 11:35:30 AM	-.001%	0.058%	-.089%	1540	1555	1689	15507
	HICV	14	51.010	4/25/2016 11:48:22 AM	3.717%	1.045%	1.521%	1536	4255	5503	15557
	SRM1650	15	.710	4/25/2016 12:02:34 PM	65.654	114.420	39.489%	1540	2222	4089	15543
	MB	16	81.060	4/25/2016 12:07:20 PM	0.005%	0.162%	0.196%	1543	1567	1925	15562
	SRM1650	17	.740	4/25/2016 12:12:05 PM	72.019	3.918%	40.414%	1543	2320	2450	15573
	MB	18	74.640	4/25/2016 12:16:46 PM	0.003%	-.012%	0.0%	1540	1559	1605	15510
	SRM1650	19	.650	4/25/2016 12:21:27 PM	73.252	-2.574%	25.881%	1539	2233	2262	15519
	SRM1650	20	68.430	4/25/2016 12:26:09 PM	0.001%	-.036%	0.382%	1540	1560	1571	15535
	SRM1650	21	1.070	4/25/2016 12:30:51 PM	70.620	-1.648%	47.166%	1539	2634	2661	15556
	MB	22	64.630	4/25/2016 12:35:34 PM	0.003%	-.043%	0.419%	1541	1563	1568	15550
	CCV	23	10.040	4/25/2016 12:40:18 PM	0.885%	4.637%	4.747%	1539	1687	2785	15556
	CCB	24	54.730	4/25/2016 12:45:02 PM	0.001%	0.005%	0.444%	1540	1560	1632	15539
	160979501	25	17.220	4/25/2016 2:20:40 PM	0.008%	0.378%	2.822%	1538	1562	1772	15546
	160979501	26	24.110	4/25/2016 2:25:22 PM	0.005%	0.326%	0.930%	1538	1558	1799	15515

Reported on 4/26/2016 9:18 AM by mansfield_toc1

Run Details				Results			Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
160979501	27	16.660	4/25/2016 2:30:03 PM	0.004%	0.295%	0.841%	1539	1557	1732	15514
1609797501	28	22.050	4/25/2016 2:34:45 PM	0.007%	0.321%	0.424%	1538	1557	1780	15498
160979502	29	16.880	4/25/2016 2:39:27 PM	0.113%	0.207%	1.329%	1538	1583	1727	15511
160979502	30	15.240	4/25/2016 2:44:09 PM	0.130%	0.188%	2.269%	1537	1585	1715	15521
160979502	31	18.280	4/25/2016 2:48:50 PM	0.107%	0.196%	1.789%	1539	1587	1732	15537
160979502	32	16.870	4/25/2016 2:53:33 PM	0.116%	0.153%	1.884%	1538	1585	1708	15523
160979503	33	22.060	4/25/2016 2:58:14 PM	0.004%	0.246%	0.508%	1539	1557	1744	15510
1609795503	34	32.320	4/25/2016 3:02:56 PM	0.005%	0.315%	0.318%	1538	1558	1849	15501
CCV	35	10.290	4/25/2016 3:07:39 PM	0.898%	5.101%	3.179%	1539	1689	2920	15531
CCB	36	58.210	4/25/2016 3:12:24 PM	0.002%	-.018%	0.450%	1542	1563	1605	15560
160979503	37	16.530	4/25/2016 3:19:05 PM	-.005%	0.182%	0.792%	1538	1554	1687	15505
160979503	38	16.490	4/25/2016 3:23:46 PM	-.003%	0.247%	0.793%	1538	1555	1712	15509
1609797504	39	10.500	4/25/2016 3:28:28 PM	0.287%	0.110%	3.115%	1538	1601	1692	15528
160979504	40	17.310	4/25/2016 3:33:10 PM	0.285%	0.312%	3.023%	1537	1629	1815	15541
160979504	41	13.170	4/25/2016 3:37:52 PM	0.327%	0.320%	3.619%	1539	1621	1781	15553
1609797504	42	18.370	4/25/2016 3:42:34 PM	0.336%	0.327%	3.765%	1537	1648	1848	15556
160979505	43	15.010	4/25/2016 3:47:16 PM	0.106%	0.146%	2.491%	1539	1581	1696	15536
160979505	44	12.970	4/25/2016 3:51:59 PM	0.160%	0.024%	2.234%	1537	1586	1659	15515
160979505	45	6.970	4/25/2016 3:56:40 PM	0.087%	-.221%	3.486%	1538	1566	1597	15519
160979505	46	13.220	4/25/2016 4:01:23 PM	0.103%	0.067%	2.969%	1537	1577	1662	15524
CCV	47	10.090	4/25/2016 4:06:08 PM	0.853%	5.347%	1.852%	1540	1680	2943	15531
CCB	48	65.270	4/25/2016 4:10:53 PM	0.002%	-.011%	0.243%	1540	1560	1610	15532
160979506	49	16.410	4/25/2016 4:26:59 PM	0.136%	0.198%	2.563%	1538	1591	1729	15540
160979506	50	16.040	4/25/2016 4:31:42 PM	0.026%	0.169%	2.389%	1539	1565	1691	15539
160979506	51	15.170	4/25/2016 4:36:25 PM	0.031%	0.155%	2.218%	1538	1564	1682	15524
160979506	52	12.670	4/25/2016 4:41:07 PM	0.041%	0.087%	2.803%	1537	1565	1655	15521
160979506D	53	11.600	4/25/2016 4:45:51 PM	0.036%	0.007%	3.384%	1539	1565	1633	15540

Reported on 4/26/2016 9:18 AM by mansfield_toc1

Run Details				Results			Signals			
Run	Run #	Weight	Created on	Carbon	Hydroge	Nitrogen	ZR	CR	HR	NR
160979506D	53	11.600	4/25/2016 4:45:51 PM	0.036%	0.007%	3.384%	1539	1565	1633	15540
160979506D	54	16.140	4/25/2016 4:50:35 PM	0.055%	0.073%	2.027%	1538	1570	1662	15522
160979506D	55	17.930	4/25/2016 4:55:19 PM	0.035%	0.130%	1.668%	1537	1565	1683	15513
160979506D	56	18.350	4/25/2016 5:00:04 PM	0.042%	0.152%	1.732%	1538	1568	1696	15525
160979506MS	57	15.180	4/25/2016 5:04:45 PM	0.687%	3.344%	1.108%	1537	1703	2895	15500
160979506MS	58	19.130	4/25/2016 5:09:27 PM	0.572%	2.714%	0.977%	1539	1713	2930	15522
CCV	59	10.200	4/25/2016 5:14:08 PM	0.965%	4.036%	4.765%	1540	1701	2680	15562
CCB	60	32.370	4/25/2016 5:18:49 PM	0.001%	-.044%	0.260%	1541	1558	1592	15528
160979506MS	61	11.710	4/26/2016 7:56:49 AM	0.840%	4.605%	65.445%	1537	1775	3036	16299
160979506MS	62	11.260	4/26/2016 8:01:29 AM	0.906%	4.638%	16.517%	1544	1725	2949	15748
CCV	63	10.130	4/26/2016 8:08:49 AM	0.675%	5.236%	18.359%	1539	1673	2915	15703
CCB	64	67.080	4/26/2016 8:13:28 AM	0.001%	0.049%	0.279%	1541	1560	1699	15539
CCV	65	9.890	4/26/2016 9:14:28 AM	1.001%	5.378%	5.859%	1538	1701	2947	15552

Sample Raw Data

Date of report	4/26/2016 9:18:20AM
User ID	mansfield_toc1

DATE & TIME	4/25/2016 10:03:21 AM	P_ID	042516CM
RUN TYPE	K1	USER ID	mansfield_toc1
WEIGHT (mg)	10.230	MODE	CHN

SIGNALS

		ZR	15821	AVERAGE RESULTS	
KC	-194.184	NR	24440	KC	13.424
KH	63.820	CR	4634	KH	21.162
KN	7.134	HR	38133	KN	0.107

BLANKS	59	659	102
K FACTORS	1.0%	5.03%	11.67%
FILL TIME	10 Seconds		

NUMBER	MESSAGE
8	CHECK FOR SAMPLE DROP
12	NITROGEN KFACTOR OUT OF TOLERANCE

DATE & TIME	4/25/2016 10:29:03 AM	P_ID	042516CM
RUN TYPE	K1	USER ID	mansfield_toc1
WEIGHT (mg)	10.040	MODE	CHN

SIGNALS

		ZR	15341	AVERAGE RESULTS	
KC	13.705	NR	15650	KC	13.564
KH	22.627	CR	17085	KH	21.894
KN	0.177	HR	29171	KN	0.107

BLANKS	59	659	102
K FACTORS	1.0%	5.03%	11.67%
FILL TIME	22 Seconds		

DATE & TIME	4/25/2016 10:43:43 AM	P_ID	042516CM
RUN TYPE	K1	USER ID	mansfield_toc1
WEIGHT (mg)	9.990	MODE	CHN

SIGNALS

		ZR	15355	AVERAGE RESULTS	
KC	13.874	NR	15507	KC	13.719
KH	22.283	CR	16952	KH	22.088
KN	0.043	HR	28808	KN	0.107

BLANKS	59	659	102
K FACTORS	1.0%	5.03%	11.67%
FILL TIME	22 Seconds		

NUMBER	MESSAGE
12	NITROGEN KFACTOR OUT OF TOLERANCE

DATE & TIME	4/25/2016 10:49:33 AM	P_ID	042516CM
RUN TYPE	BLANK	USER ID	mansfield_toc1
		MODE	CHN

SIGNALS

		ZR	15377	AVERAGE RESULTS	
CARBON	51	NR	15487	CARBON	55
HYDROGEN	1547	CR	15538	HYDROGEN	659
NITROGEN	110	HR	17085	NITROGEN	106

FILL TIME	22 Seconds

DATE & TIME	4/25/2016 10:54:13 AM	P_ID	042516CM
RUN TYPE	K1	USER ID	mansfield_toc1
WEIGHT (mg)	9.770	MODE	CHN

				SIGNALS			
				ZR	15369	AVERAGE RESULTS	
KC	14.698			NR	15606	KC	14.208
KH	22.268			CR	17097	KH	22.178
KN	0.115			HR	28699	KN	0.107
BLANKS	55	659	106				
K FACTORS	1.0%	5.03%	11.67%				
FILL TIME	22 Seconds						

DATE & TIME	4/25/2016 11:01:28 AM	P_ID	042516CM
SAMPLE ID	0	USER ID	mansfield_toc1
WEIGHT (mg)	10.030	MODE	CHN

				SIGNALS			
				ZR	15378		
CARBON	-.016%			NR	15510		
HYDROGEN	5.066%			CR	15542		
NITROGEN	2.423%			HR	27470		
BLANKS	55	659	106				
K FACTORS	14.208	22.178	0.107				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	26 Seconds						

DATE & TIME	4/25/2016 11:06:12 AM	P_ID	042516CM
SAMPLE ID	1000	USER ID	mansfield_toc1
WEIGHT (mg)	9.870	MODE	CHN

				SIGNALS			
				ZR	15401		
CARBON	0.068%			NR	15580		
HYDROGEN	5.166%			CR	15730		
NITROGEN	6.912%			HR	27697		
BLANKS	55	659	106				
K FACTORS	14.208	22.178	0.107				
FILL	COMB	BOOST1	BOOST2				
0	0	0	0				
FILL TIME	26 Seconds						

DATE & TIME	4/25/2016 11:10:56 AM	P_ID	042516CM
SAMPLE ID	5000	USER ID	mansfield_toc1
WEIGHT (mg)	10.290	MODE	CHN

				SIGNALS			
				ZR	15407		
CARBON	0.421%			NR	15527		
HYDROGEN	4.862%			CR	16197		
NITROGEN	1.272%			HR	27952		
BLANKS	55	659	106				

K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 25 Seconds

DATE & TIME	4/25/2016 11:15:39 AM	P_ID	042516CM
SAMPLE ID	10000	USER ID	mansfield_toc1
WEIGHT (mg)	10.360	MODE	CHN

		SIGNALS	
		ZR	15407
CARBON	0.894%	NR	15627
HYDROGEN	4.901%	CR	16998
NITROGEN	10.284%	HR	28917
BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 25 Seconds

DATE & TIME	4/25/2016 11:20:20 AM	P_ID	042516CM
SAMPLE ID	20000	USER ID	mansfield_toc1
WEIGHT (mg)	10.050	MODE	CHN

		SIGNALS	
		ZR	15403
CARBON	1.667%	NR	15617
HYDROGEN	4.921%	CR	18053
NITROGEN	10.043%	HR	29681
BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 22 Seconds

DATE & TIME	4/25/2016 11:25:01 AM	P_ID	042516CM
SAMPLE ID	40000	USER ID	mansfield_toc1
WEIGHT (mg)	10.920	MODE	CHN

		SIGNALS	
		ZR	15404
CARBON	3.569%	NR	15513
HYDROGEN	4.704%	CR	21106
NITROGEN	0.257%	HR	33157
BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 22 Seconds

DATE & TIME	4/25/2016 11:30:50 AM	P_ID	042516CM
SAMPLE ID	ICV	USER ID	mansfield_toc1
WEIGHT (mg)	10.060	MODE	CHN

				SIGNALS	
				ZR	15406
CARBON	0.957%			NR	15526
HYDROGEN	4.909%			CR	16949
NITROGEN	1.301%			HR	28560
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	25 Seconds				

DATE & TIME	4/25/2016 11:35:30 AM	P_ID	042516CM
SAMPLE ID	ICB	USER ID	mansfield_toc1
WEIGHT (mg)	52.750	MODE	CHN

				SIGNALS	
				ZR	15406
CARBON	-.001%			NR	15507
HYDROGEN	0.058%			CR	15556
NITROGEN	-.089%			HR	16899
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	22 Seconds				

DATE & TIME	4/25/2016 11:48:22 AM	P_ID	042516CM
SAMPLE ID	HICV	USER ID	mansfield_toc1
WEIGHT (mg)	51.010	MODE	CHN

				SIGNALS	
				ZR	15368
CARBON	3.717%			NR	15557
HYDROGEN	1.045%			CR	42551
NITROGEN	1.521%			HR	55032
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	22 Seconds				

DATE & TIME	4/25/2016 12:02:34 PM	P_ID	042516CM
SAMPLE ID	SRM1650	USER ID	mansfield_toc1
WEIGHT (mg)	.710	MODE	CHN

				SIGNALS	
				ZR	15407
CARBON	65.654%			NR	15543
HYDROGEN	114.420%			CR	22221
NITROGEN	39.489%			HR	40897
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	26 Seconds				

DATE & TIME	4/25/2016 12:07:20 PM	P_ID	042516CM
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	81.060	MODE	CHN

		SIGNALS	
		ZR	15439
CARBON	0.005%	NR	15562
HYDROGEN	0.162%	CR	15678
NITROGEN	0.196%	HR	19252

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 27 Seconds

DATE & TIME	4/25/2016 12:12:05 PM	P_ID	042516CM
SAMPLE ID	SRM1650	USER ID	mansfield_toc1
WEIGHT (mg)	.740	MODE	CHN

		SIGNALS	
		ZR	15435
CARBON	72.019%	NR	15573
HYDROGEN	3.918%	CR	23200
NITROGEN	40.414%	HR	24502

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 27 Seconds

DATE & TIME	4/25/2016 12:16:46 PM	P_ID	042516CM
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	74.640	MODE	CHN

		SIGNALS	
		ZR	15404
CARBON	0.003%	NR	15510
HYDROGEN	-.012%	CR	15594
NITROGEN	0.0%	HR	16053

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 22 Seconds

DATE & TIME	4/25/2016 12:21:27 PM	P_ID	042516CM
SAMPLE ID	SRM1650	USER ID	mansfield_toc1
WEIGHT (mg)	.650	MODE	CHN

		SIGNALS	
		ZR	15395
CARBON	73.252%	NR	15519
HYDROGEN	-2.574%	CR	22339
NITROGEN	25.881%	HR	22627

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 22 Seconds

DATE & TIME	4/25/2016 12:26:09 PM	P_ID	042516CM
SAMPLE ID	SRM1650	USER ID	mansfield_toc1
WEIGHT (mg)	68.430	MODE	CHN

		SIGNALS	
		ZR	15401
CARBON	0.001%	NR	15535
HYDROGEN	-.036%	CR	15602
NITROGEN	0.382%	HR	15717

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 12:30:51 PM	P_ID	042516CM
SAMPLE ID	SRM1650	USER ID	mansfield_toc1
WEIGHT (mg)	1.070	MODE	CHN

		SIGNALS	
		ZR	15396
CARBON	70.620%	NR	15556
HYDROGEN	-1.648%	CR	26347
NITROGEN	47.166%	HR	26615

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 12:35:34 PM	P_ID	042516CM
SAMPLE ID	MB	USER ID	mansfield_toc1
WEIGHT (mg)	64.630	MODE	CHN

		SIGNALS	
		ZR	15415
CARBON	0.003%	NR	15550
HYDROGEN	-.043%	CR	15634
NITROGEN	0.419%	HR	15682

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 12:40:18 PM	P_ID	042516CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.040	MODE	CHN

				SIGNALS	
				ZR	15399
CARBON	0.885%			NR	15556
HYDROGEN	4.637%			CR	16874
NITROGEN	4.747%			HR	27858
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	25 Seconds				

DATE & TIME	4/25/2016 12:45:02 PM	P_ID	042516CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	54.730	MODE	CHN

				SIGNALS	
				ZR	15407
CARBON	0.001%			NR	15539
HYDROGEN	0.005%			CR	15605
NITROGEN	0.444%			HR	16323
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	25 Seconds				

DATE & TIME	4/25/2016 2:20:40 PM	P_ID	042516CM
SAMPLE ID	160979501	USER ID	mansfield_toc1
WEIGHT (mg)	17.220	MODE	CHN

				SIGNALS	
				ZR	15388
CARBON	0.008%			NR	15546
HYDROGEN	0.378%			CR	15621
NITROGEN	2.822%			HR	17722
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 2:25:22 PM	P_ID	042516CM
SAMPLE ID	160979501	USER ID	mansfield_toc1
WEIGHT (mg)	24.110	MODE	CHN

				SIGNALS	
				ZR	15385
CARBON	0.005%			NR	15515
HYDROGEN	0.326%			CR	15588
NITROGEN	0.930%			HR	17992
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 2:30:03 PM	P_ID	042516CM
SAMPLE ID	160979501	USER ID	mansfield_toc1
WEIGHT (mg)	16.660	MODE	CHN

			SIGNALS	
			ZR	15393
CARBON	0.004%		NR	15514
HYDROGEN	0.295%		CR	15578
NITROGEN	0.841%		HR	17327
BLANKS	55	659	106	
K FACTORS	14.208	22.178	0.107	

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 2:34:45 PM	P_ID	042516CM
SAMPLE ID	1609797501	USER ID	mansfield_toc1
WEIGHT (mg)	22.050	MODE	CHN

			SIGNALS	
			ZR	15382
CARBON	0.007%		NR	15498
HYDROGEN	0.321%		CR	15574
NITROGEN	0.424%		HR	17801
BLANKS	55	659	106	
K FACTORS	14.208	22.178	0.107	

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 2:39:27 PM	P_ID	042516CM
SAMPLE ID	160979502	USER ID	mansfield_toc1
WEIGHT (mg)	16.880	MODE	CHN

			SIGNALS	
			ZR	15381
CARBON	0.113%		NR	15511
HYDROGEN	0.207%		CR	15837
NITROGEN	1.329%		HR	17270
BLANKS	55	659	106	
K FACTORS	14.208	22.178	0.107	

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 2:44:09 PM	P_ID	042516CM
SAMPLE ID	160979502	USER ID	mansfield_toc1
WEIGHT (mg)	15.240	MODE	CHN

		SIGNALS	
		ZR	15378
CARBON	0.130%	NR	15521
HYDROGEN	0.188%	CR	15858
NITROGEN	2.269%	HR	17152

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 2:48:50 PM	P_ID	042516CM
SAMPLE ID	160979502	USER ID	mansfield_toc1
WEIGHT (mg)	18.280	MODE	CHN

		SIGNALS	
		ZR	15396
CARBON	0.107%	NR	15537
HYDROGEN	0.196%	CR	15871
NITROGEN	1.789%	HR	17324

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 2:53:33 PM	P_ID	042516CM
SAMPLE ID	160979502	USER ID	mansfield_toc1
WEIGHT (mg)	16.870	MODE	CHN

		SIGNALS	
		ZR	15383
CARBON	0.116%	NR	15523
HYDROGEN	0.153%	CR	15857
NITROGEN	1.884%	HR	17088

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 2:58:14 PM	P_ID	042516CM
SAMPLE ID	160979503	USER ID	mansfield_toc1
WEIGHT (mg)	22.060	MODE	CHN

		SIGNALS	
		ZR	15392
CARBON	0.004%	NR	15510
HYDROGEN	0.246%	CR	15577
NITROGEN	0.508%	HR	17441

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 3:02:56 PM	P_ID	042516CM
SAMPLE ID	1609795503	USER ID	mansfield_toc1
WEIGHT (mg)	32.320	MODE	CHN

				SIGNALS	
				ZR	15384
CARBON	0.005%			NR	15501
HYDROGEN	0.315%			CR	15581
NITROGEN	0.318%			HR	18495
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 3:07:39 PM	P_ID	042516CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.290	MODE	CHN

				SIGNALS	
				ZR	15390
CARBON	0.898%			NR	15531
HYDROGEN	5.101%			CR	16899
NITROGEN	3.179%			HR	29200
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	25 Seconds				

DATE & TIME	4/25/2016 3:12:24 PM	P_ID	042516CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	58.210	MODE	CHN

				SIGNALS	
				ZR	15426
CARBON	0.002%			NR	15560
HYDROGEN	-.018%			CR	15634
NITROGEN	0.450%			HR	16057
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	26 Seconds				

DATE & TIME	4/25/2016 3:19:05 PM	P_ID	042516CM
SAMPLE ID	160979503	USER ID	mansfield_toc1
WEIGHT (mg)	16.530	MODE	CHN

				SIGNALS	
				ZR	15385
CARBON	-.005%			NR	15505
HYDROGEN	0.182%			CR	15549
NITROGEN	0.792%			HR	16875
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 3:23:46 PM	P_ID	042516CM
SAMPLE ID	160979503	USER ID	mansfield_toc1
WEIGHT (mg)	16.490	MODE	CHN

		SIGNALS	
		ZR	15389
CARBON	.003%	NR	15509
HYDROGEN	0.247%	CR	15558
NITROGEN	0.793%	HR	17121

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 3:28:28 PM	P_ID	042516CM
SAMPLE ID	1609797504	USER ID	mansfield_toc1
WEIGHT (mg)	10.500	MODE	CHN

		SIGNALS	
		ZR	15387
CARBON	0.287%	NR	15528
HYDROGEN	0.110%	CR	16011
NITROGEN	3.115%	HR	16926

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 3:33:10 PM	P_ID	042516CM
SAMPLE ID	160979504	USER ID	mansfield_toc1
WEIGHT (mg)	17.310	MODE	CHN

		SIGNALS	
		ZR	15379
CARBON	0.285%	NR	15541
HYDROGEN	0.312%	CR	16298
NITROGEN	3.023%	HR	18156

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 3:37:52 PM	P_ID	042516CM
SAMPLE ID	160979504	USER ID	mansfield_toc1
WEIGHT (mg)	13.170	MODE	CHN

		SIGNALS	
		ZR	15396
CARBON	0.327%	NR	15553
HYDROGEN	0.320%	CR	16219
NITROGEN	3.619%	HR	17814

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 3:42:34 PM	P_ID	042516CM
SAMPLE ID	1609797504	USER ID	mansfield_toc1
WEIGHT (mg)	18.370	MODE	CHN

		SIGNALS	
		ZR	15376
CARBON	0.336%	NR	15556
HYDROGEN	0.327%	CR	16489
NITROGEN	3.765%	HR	18480

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 3:47:16 PM	P_ID	042516CM
SAMPLE ID	160979505	USER ID	mansfield_toc1
WEIGHT (mg)	15.010	MODE	CHN

		SIGNALS	
		ZR	15390
CARBON	0.106%	NR	15536
HYDROGEN	0.146%	CR	15816
NITROGEN	2.491%	HR	16962

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 23 Seconds

DATE & TIME	4/25/2016 3:51:59 PM	P_ID	042516CM
SAMPLE ID	160979505	USER ID	mansfield_toc1
WEIGHT (mg)	12.970	MODE	CHN

		SIGNALS	
		ZR	15378
CARBON	0.160%	NR	15515
HYDROGEN	0.024%	CR	15864
NITROGEN	2.234%	HR	16591

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 3:56:40 PM	P_ID	042516CM
SAMPLE ID	160979505	USER ID	mansfield_toc1
WEIGHT (mg)	6.970	MODE	CHN

				SIGNALS	
				ZR	15387
CARBON	0.087%			NR	15519
HYDROGEN	-.221%			CR	15660
NITROGEN	3.486%			HR	15977
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 4:01:23 PM	P_ID	042516CM
SAMPLE ID	160979505	USER ID	mansfield_toc1
WEIGHT (mg)	13.220	MODE	CHN

				SIGNALS	
				ZR	15376
CARBON	0.103%			NR	15524
HYDROGEN	0.067%			CR	15772
NITROGEN	2.969%			HR	16626
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	24 Seconds				

DATE & TIME	4/25/2016 4:06:08 PM	P_ID	042516CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.090	MODE	CHN

				SIGNALS	
				ZR	15405
CARBON	0.853%			NR	15531
HYDROGEN	5.347%			CR	16809
NITROGEN	1.852%			HR	29433
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	26 Seconds				

DATE & TIME	4/25/2016 4:10:53 PM	P_ID	042516CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	65.270	MODE	CHN

				SIGNALS	
				ZR	15409
CARBON	0.002%			NR	15532
HYDROGEN	-.011%			CR	15606
NITROGEN	0.243%			HR	16105
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	26 Seconds				

DATE & TIME	4/25/2016 4:26:59 PM	P_ID	042516CM
SAMPLE ID	160979506	USER ID	mansfield_toc1
WEIGHT (mg)	16.410	MODE	CHN

		SIGNALS	
		ZR	15389
CARBON	0.136%	NR	15540
HYDROGEN	0.198%	CR	15911
NITROGEN	2.563%	HR	17292

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 4:31:42 PM	P_ID	042516CM
SAMPLE ID	160979506	USER ID	mansfield_toc1
WEIGHT (mg)	16.040	MODE	CHN

		SIGNALS	
		ZR	15392
CARBON	0.026%	NR	15539
HYDROGEN	0.169%	CR	15653
NITROGEN	2.389%	HR	16913

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 4:36:25 PM	P_ID	042516CM
SAMPLE ID	160979506	USER ID	mansfield_toc1
WEIGHT (mg)	15.170	MODE	CHN

		SIGNALS	
		ZR	15382
CARBON	0.031%	NR	15524
HYDROGEN	0.155%	CR	15645
NITROGEN	2.218%	HR	16827

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 4:41:07 PM	P_ID	042516CM
SAMPLE ID	160979506	USER ID	mansfield_toc1
WEIGHT (mg)	12.670	MODE	CHN

		SIGNALS	
		ZR	15377
CARBON	0.041%	NR	15521
HYDROGEN	0.087%	CR	15650
NITROGEN	2.803%	HR	16553

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 24 Seconds

DATE & TIME	4/25/2016 4:45:51 PM	P_ID	042516CM
SAMPLE ID	160979506D	USER ID	mansfield_toc1
WEIGHT (mg)	11.600	MODE	CHN

		SIGNALS	
		ZR	15392
CARBON	0.036%	NR	15540
HYDROGEN	0.007%	CR	15654
NITROGEN	3.384%	HR	16332

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 25 Seconds

DATE & TIME	4/25/2016 4:50:35 PM	P_ID	042516CM
SAMPLE ID	160979506D	USER ID	mansfield_toc1
WEIGHT (mg)	16.140	MODE	CHN

		SIGNALS	
		ZR	15381
CARBON	0.055%	NR	15522
HYDROGEN	0.073%	CR	15702
NITROGEN	2.027%	HR	16622

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 25 Seconds

DATE & TIME	4/25/2016 4:55:19 PM	P_ID	042516CM
SAMPLE ID	160979506D	USER ID	mansfield_toc1
WEIGHT (mg)	17.930	MODE	CHN

		SIGNALS	
		ZR	15375
CARBON	0.035%	NR	15513
HYDROGEN	0.130%	CR	15658
NITROGEN	1.668%	HR	16835

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 26 Seconds

DATE & TIME	4/25/2016 5:00:04 PM	P_ID	042516CM
SAMPLE ID	160979506D	USER ID	mansfield_toc1
WEIGHT (mg)	18.350	MODE	CHN

				SIGNALS	
				ZR	15385
CARBON	0.042%			NR	15525
HYDROGEN	0.152%			CR	15689
NITROGEN	1.732%			HR	16965
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	26 Seconds				

DATE & TIME	4/25/2016 5:04:45 PM	P_ID	042516CM
SAMPLE ID	160979506MS	USER ID	mansfield_toc1
WEIGHT (mg)	15.180	MODE	CHN

				SIGNALS	
				ZR	15376
CARBON	0.687%			NR	15500
HYDROGEN	3.344%			CR	17037
NITROGEN	1.108%			HR	28955
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 5:09:27 PM	P_ID	042516CM
SAMPLE ID	160979506MS	USER ID	mansfield_toc1
WEIGHT (mg)	19.130	MODE	CHN

				SIGNALS	
				ZR	15396
CARBON	0.572%			NR	15522
HYDROGEN	2.714%			CR	17133
NITROGEN	0.977%			HR	29308
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 5:14:08 PM	P_ID	042516CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.200	MODE	CHN

				SIGNALS	
				ZR	15404
CARBON	0.965%			NR	15562
HYDROGEN	4.036%			CR	17015
NITROGEN	4.765%			HR	26805
BLANKS	55	659	106		
K FACTORS	14.208	22.178	0.107		
FILL	COMB	BOOST1	BOOST2		
0	0	0	0		
FILL TIME	23 Seconds				

DATE & TIME	4/25/2016 5:18:49 PM	P_ID	042516CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	32.370	MODE	CHN

		SIGNALS	
		ZR	15413
CARBON	0.001%	NR	15528
HYDROGEN	-.044%	CR	15587
NITROGEN	0.260%	HR	15928

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	23 Seconds		

DATE & TIME	4/26/2016 7:56:49 AM	P_ID	042516CM
SAMPLE ID	160979506MS	USER ID	mansfield_toc1
WEIGHT (mg)	11.710	MODE	CHN

		SIGNALS	
		ZR	15373
CARBON	0.840%	NR	16299
HYDROGEN	4.605%	CR	17751
NITROGEN	65.445%	HR	30369

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	20 Seconds		

DATE & TIME	4/26/2016 8:01:29 AM	P_ID	042516CM
SAMPLE ID	160979506MS	USER ID	mansfield_toc1
WEIGHT (mg)	11.260	MODE	CHN

		SIGNALS	
		ZR	15443
CARBON	0.906%	NR	15748
HYDROGEN	4.638%	CR	17253
NITROGEN	16.517%	HR	29495

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0
FILL TIME	21 Seconds		

DATE & TIME	4/26/2016 8:08:49 AM	P_ID	042516CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	10.130	MODE	CHN

		SIGNALS	
		ZR	15398
CARBON	0.675%	NR	15703
HYDROGEN	5.236%	CR	16730
NITROGEN	18.359%	HR	29152

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 20 Seconds

DATE & TIME	4/26/2016 8:13:28 AM	P_ID	042516CM
SAMPLE ID	CCB	USER ID	mansfield_toc1
WEIGHT (mg)	67.080	MODE	CHN

		SIGNALS	
		ZR	15413
CARBON	0.001%	NR	15539
HYDROGEN	0.049%	CR	15604
NITROGEN	0.279%	HR	16995

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 20 Seconds

DATE & TIME	4/26/2016 9:14:28 AM	P_ID	042516CM
SAMPLE ID	CCV	USER ID	mansfield_toc1
WEIGHT (mg)	9.890	MODE	CHN

		SIGNALS	
		ZR	15384
CARBON	1.001%	NR	15552
HYDROGEN	5.378%	CR	17014
NITROGEN	5.859%	HR	29470

BLANKS	55	659	106
K FACTORS	14.208	22.178	0.107

FILL	COMB	BOOST1	BOOST2
0	0	0	0

FILL TIME 20 Seconds

Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Apr 26 2016, 11:23 am

Work Group: WG887301 for Department: 7 Wet Chemistry

Created: 26-APR-16 Due: Operator:

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L1609795-01	5237-160331-NDP-SED0	S	A2-SOOT-LK-4REPS	SOIL	DONE	U	0414	0426	S0	Glass-A.120
L1609795-02	5237-160331-NDP-SED0	S	A2-SOOT-LK-4REPS	SOIL	DONE	U	0414	0426	S0	Glass-A.120
L1609795-03	5237-160331-NDP-SED0	S	A2-SOOT-LK-4REPS	SOIL	DONE	U	0414	0426	S0	Glass-A.120
L1609795-04	5237-160331-NDP-SED0	S	A2-SOOT-LK-4REPS	SOIL	DONE	U	0414	0426	S0	Glass-A.120
L1609795-05	5237-160331-NDP-SED0	S	A2-SOOT-LK-4REPS	SOIL	DONE	U	0414	0426	S0	Glass-A.120
L1609795-06	5237-160331-NDP-EMB0	S	A2-SOOT-LK-4REPS	SOIL	DONE	U	0414	0426	S0	Glass-A.120
WG887301-1	Laboratory Method Bl	S	A2-SOOT-LK-4REPS	SOIL	DONE	U				
WG887301-2	Standard Reference M	S	A2-SOOT-LK-4REPS	SOIL	DONE	U				
WG887301-3	Duplicate Sample	S	A2-SOOT-LK-4REPS	SOIL	DONE	U				
WG887301-4	Matrix Spike	S	A2-SOOT-LK-4REPS	SOIL	DONE	U				

Comments:

WG887301-3	L1609795-06
WG887301-4	L1609795-06

Sample Preparation

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

Date: 4/25/16
Analyst: CO
2° Review: ______

CCV ID: WW120315A→E
SRM 1944 ID: WS081814A
Filter Aid ID: WS030411A

ICV ID: WW120315F
Balance ID: 002288
Other SRM ID:

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
~~Conditioning Std~~ K				1	10.23
~~Blank~~ K				2	10.04
K Factor K				3	9.99
Blank				4	52.85
~~K Factor~~ K				5	9.77
~~K Factor~~ Ø				6	10.03
~~ICV~~ 1000				7	9.87
~~ICB~~ 5000				8	10.29
~~LCS~~ 10000				9	10.36
~~Blank~~ 20000				10	10.05
40000				11	10.92
ICV				12	10.06
ICB				13	52.75
HICV				14	51.01
SRM1650				15	0.71
MB				16	81.06
SRM1650				17	0.74
MB				18	74.64
~~CCV~~ SRM1650				19	0.65
~~CCB~~ MB				20	68.43
SRM1650b				21	1.07
MB				22	64.63

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
CCV				23	10.04
CCB				24	54.73
L1609795	01			25	17.22
↓	01			26	24.11
	01			27	16.66
	01			28	22.05
	02			29	16.88
	02			30	15.24
~~CCV~~	02			31	18.28
~~CCB~~	02			32	16.87
	03			33	22.06
	03			34	32.32
CCV				35	10.29
CCB				36	58.21
L1609795	03			37	16.53
↓	03			38	16.49
	04			39	10.50
	04			40	17.31
	04			41	13.17
	04			42	18.37
~~CCV~~	05			43	15.01
~~CCB~~	05			44	12.97

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

Date: _____ 2° Review: _____
Analyst: _____

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					
L1609795	05			45	6.97
↓	05			46	13.22
CCV				47	10.09
CCB				48	6627
L1609795	06			49	16.41
	06			50	16.04
	06			51	15.17
	06			52	12.67
~~CCV~~	06D			53	11.60
~~CCB~~	06D			54	16.14
	06D			55	17.93
↓	06D			56	18.35

Login	SAMPLE	QC D/MS	TRAY LOCATION	AUTO SLOT	WEIGHT (mg)
L1609795	06MS	10.23		57	15.18
↓	06MS	10.60		58	19.13
CCV				59	10.20
CCB				60	32.37
L1609795	06MS	9.90		61	11.71
	06MS	10.12		62	11.26
CCV				63	10.13
CCB				64	67.08
~~CCV~~ CCV				65	9.89
~~CCB~~					
CCV					
CCB					

Alpha Report

ANALYTICAL REPORT

Lab Number:	L1609795
Client:	Apex labs 12232 SW Garden Place Tigard, OR 97223
ATTN:	Philip Nerenberg
Phone:	(503) 718-2323
Project Name:	A6D0013
Project Number:	Not Specified
Report Date:	04/26/16

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.

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

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1609795-01	5237-160331-NDP-SED003	SEDIMENT	Not Specified	03/31/16 10:35	04/05/16
L1609795-02	5237-160331-NDP-SED002	SEDIMENT	Not Specified	03/31/16 10:45	04/05/16
L1609795-03	5237-160331-NDP-SED001	SEDIMENT	Not Specified	03/31/16 11:00	04/05/16
L1609795-04	5237-160331-NDP-SED005	SEDIMENT	Not Specified	03/31/16 11:00	04/05/16
L1609795-05	5237-160331-NDP-SED004	SEDIMENT	Not Specified	03/31/16 11:40	04/05/16
L1609795-06	5237-160331-NDP-EMB001	SEDIMENT	Not Specified	03/31/16 14:40	04/05/16

Project Name: A6D0013 **Lab Number:** L1609795
Project Number: Not Specified **Report Date:** 04/26/16

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: A6D0013 **Lab Number:** L1609795
Project Number: Not Specified **Report Date:** 04/26/16

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.

General Chemistry

The WG887301-3 Laboratory Duplicate RPD, performed on L1609795-06, is above the acceptance criteria for % Soot (Rep 1) (86%); however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

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: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 04/26/16

INORGANICS
&
MISCELLANEOUS

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

SAMPLE RESULTS

Lab ID: L1609795-01
Client ID: 5237-160331-NDP-SED003
Sample Location: Not Specified
Matrix: Sediment

Date Collected: 03/31/16 10:35
Date Received: 04/05/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
% Soot (Rep 1)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 2)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 3)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 4)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Average)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

SAMPLE RESULTS

Lab ID: L1609795-02
Client ID: 5237-160331-NDP-SED002
Sample Location: Not Specified
Matrix: Sediment

Date Collected: 03/31/16 10:45
Date Received: 04/05/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
% Soot (Rep 1)	0.146		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 2)	0.167		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 3)	0.138		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 4)	0.150		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Average)	0.150		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

SAMPLE RESULTS

Lab ID: L1609795-03
Client ID: 5237-160331-NDP-SED001
Sample Location: Not Specified
Matrix: Sediment

Date Collected: 03/31/16 11:00
Date Received: 04/05/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
% Soot (Rep 1)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 2)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 3)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 4)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Average)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

SAMPLE RESULTS

Lab ID: L1609795-04
Client ID: 5237-160331-NDP-SED005
Sample Location: Not Specified
Matrix: Sediment

Date Collected: 03/31/16 11:00
Date Received: 04/05/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
% Soot (Rep 1)	0.353		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 2)	0.339		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 3)	0.391		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 4)	0.395		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Average)	0.369		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

SAMPLE RESULTS

Lab ID: L1609795-05
Client ID: 5237-160331-NDP-SED004
Sample Location: Not Specified
Matrix: Sediment

Date Collected: 03/31/16 11:40
Date Received: 04/05/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
% Soot (Rep 1)	0.140		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 2)	0.204		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 3)	0.144		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 4)	0.140		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Average)	0.157		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

SAMPLE RESULTS

Lab ID: L1609795-06
Client ID: 5237-160331-NDP-EMB001
Sample Location: Not Specified
Matrix: Sediment

Date Collected: 03/31/16 14:40
Date Received: 04/05/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
% Soot (Rep 1)	0.172		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 2)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 3)	0.056		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 4)	0.072		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Average)	0.087		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM

Project Name: A6D0013 **Lab Number:** L1609795

Project Number: Not Specified **Report Date:** 04/26/16

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 01-06 Batch: WG887301-1										
% Soot (Rep 1)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 2)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 3)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Rep 4)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM
% Soot (Average)	ND		%	0.050	NA	1	-	04/25/16 11:30	91,-	CM

Matrix Spike Analysis
Batch Quality Control

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG887301-4 QC Sample: L1609795-06 Client ID: 5237-160331-NDP-EMB001												
% Soot (Rep 1)	0.172	0.674	0.792	92		-	-		75-125	-		25
% Soot (Rep 2)	ND	0.554	0.659	119		-	-		75-125	-		25
% Soot (Rep 3)	0.056	0.845	0.969	108		-	-		75-125	-		25
% Soot (Rep 4)	0.072	0.899	1.04	108		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG887301-3 QC Sample: L1609795-06 Client ID: 5237-160331-NDP-EMB001						
% Soot (Rep 1)	0.172	0.068	%	**86**	Q	25
% Soot (Rep 2)	ND	0.081	%	NC		25
% Soot (Rep 3)	0.056	0.058	%	3		25
% Soot (Rep 4)	0.072	0.065	%	10		25
% Soot (Average)	0.087	0.068	%	25		25

Project Name: A6D0013 **Lab Number:** L1609795

Project Number: Not Specified **Report Date:** 04/26/16

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG887301-2

Parameter	% Recovery	Qual	QC Criteria
% Soot (Rep 1)	95		75-125
% Soot (Rep 2)	104		75-125
% Soot (Rep 3)	106		75-125
% Soot (Rep 4)	102		75-125

Project Name: A6D0013
Project Number: Not Specified

Lab Number: L1609795
Report Date: 04/26/16

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(*)
L1609795-01A	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	A2-SOOT-LK-4REPS(14)
L1609795-02A	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	A2-SOOT-LK-4REPS(14)
L1609795-03A	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	A2-SOOT-LK-4REPS(14)
L1609795-04A	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	A2-SOOT-LK-4REPS(14)
L1609795-05A	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	A2-SOOT-LK-4REPS(14)
L1609795-06A	Glass 120ml/4oz unpreserved	A	N/A	4.3	Y	Absent	A2-SOOT-LK-4REPS(14)

*Values in parentheses indicate holding time in days

Project Name:	A6D0013	**Lab Number:**	L1609795
Project Number:	Not Specified	**Report Date:**	04/26/16

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.

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 reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: DU Report with 'J' Qualifiers

Project Name:	A6D0013	**Lab Number:**	L1609795
Project Number:	Not Specified	**Report Date:**	04/26/16

Data Qualifiers

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

REFERENCES

91 Analysis of Soot following ES&T publications by Accardi-Dey and Gschwend, 2003; and Gustafsson (et. al.), 1997.

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead***; 8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, 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**.

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

AP 9/9/16

SUBCONTRACT ORDER

Apex Laboratories

A6D0013

L1609795

SENDING LABORATORY:

Apex Laboratories
12232 S.W. Garden Place
Tigard, OR 97223
Phone: (503) 718-2323
Fax: (503) 718-0333
Project Manager: Philip Nerenberg

RECEIVING LABORATORY:

Alpha Analytical, INC
320 Forbes Boulevard
Mansfield, MA 02048
Phone :(508) 822-9300
Fax:

609795
-01

NDP Sediment-003 (0-0.5)

Sample Name: 5237-160331-NDP-SED003 **Sedimen** **Sampled: 03/31/16 10:35** (A6D0013-02)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 10:35	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (D)4 oz Glass Jar			

-02

NDP Sediment-002 (0-0.5)

Sample Name: 5237-160331-NDP-SED002 **Sedimen** **Sampled: 03/31/16 10:45** (A6D0013-04)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 10:45	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

-03

NDP Sediment-001 (0-0.5)

Sample Name: 5237-160331-NDP-SED001 **Sedimen** **Sampled: 03/31/16 11:00** (A6D0013-06)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 11:00	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

-04

NDP Sediment-005 (0-0.5)

Sample Name: 5237-160331-NDP-SED005 **Sedimen** **Sampled: 03/31/16 11:00** (A6D0013-08)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 11:00	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

Standard TAT

Released By	Date	Received By	Date
	4/4/16	UPS (Shipper)	
UPS (Shipper)			
Released By	Date	Received By	Date
			4/5/16 8:28

SUBCONTRACT ORDER L1609795

Apex Laboratories

A6D0013

NDP Sediment-004(0-0.5)

Sample Name: 5237-160331-NDP-SED004 **Sedimen** **Sampled: 03/31/16 11:40** (A6D0013-10)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 11:40	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (F)4 oz Glass Jar			

NDP Embankment (0-3.5)

Sample Name: 5237-160331-NDP-EMB001 **Soil** **Sampled: 03/31/16 14:40** (A6D0013-12)

Analysis	Due	Expires	Comments
Subcontract Outside	04/14/16 17:00	09/27/16 14:40	Carbon Black-Alpha Analytical Level IV DP needed
Containers Supplied: (D)4 oz Glass Jar			

4/4/16

Released By Date

UPS (Shipper)

Released By Date

UPS (Shipper)

Received By Date

Received By Date 4/5/16 13:28