



## ANALYTICAL REPORT

Lab Number:	L1403022
Client:	TRC Environmental Consultants Wannalancit Mills 650 Suffolk Street Lowell, MA 01854
ATTN:	Melita Lihzis
Phone:	(978) 656-3600
Project Name:	MONTGOMERY COUNTY RRF
Project Number:	200454.0000.0000
Report Date:	02/21/14

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**Project Name:** MONTGOMERY COUNTY RRF  
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**Lab Number:** L1403022  
**Report Date:** 02/21/14

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1403022-01	B'VILLE-METALS-1-PRI	MARYLAND	01/29/14 13:31
L1403022-02	B'VILLE-METALS-1-COL	MARYLAND	01/29/14 13:31
L1403022-03	LUCK-METALS-1-PRI	MARYLAND	01/29/14 10:27
L1403022-04	FBB-METALS-1	MARYLAND	01/29/14 13:31

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

### 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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

### Case Narrative (continued)

#### Particulate in Air

WG669299-1 Duplicate: Per the method, one sample in ten is to be weighed in duplicate. This duplicate weighing is reported on the Lab Duplicate Analysis page of the report. The duplicate weight of the sample filter L1403022-01 was within the method criteria of 2.0 mg.

#### Metals in Air

The WG670740-3 Laboratory Duplicate RPD, performed on L1403022-01, is above the acceptance criteria for Arsenic (23%) and Cadmium (70%) however the sample and duplicate results are less than five times the reporting limit therefore no further action is 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:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 02/21/14

## METALS

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403022-01  
 Client ID: B'VILLE-METALS-1-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 01/29/14 13:31  
 Date Received: 02/07/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	0.981		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:45	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:45	EPA 3050B	1,6020A	PD
Cadmium, Total	0.351		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:45	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:45	EPA 3050B	1,6020A	PD
Lead, Total	2.79		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:45	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:01	EPA 7471B	1,7471B	PD
Nickel, Total	1.38		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:45	EPA 3050B	1,6020A	PD



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**Lab Number:** L1403022  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403022-02  
 Client ID: B'VILLE-METALS-1-COL  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 01/29/14 13:31  
 Date Received: 02/07/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	1.11		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:46	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:46	EPA 3050B	1,6020A	PD
Cadmium, Total	3.04		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:46	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:46	EPA 3050B	1,6020A	PD
Lead, Total	4.10		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:46	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:04	EPA 7471B	1,7471B	PD
Nickel, Total	1.71		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:46	EPA 3050B	1,6020A	PD



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**Lab Number:** L1403022  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403022-03  
 Client ID: LUCK-METALS-1-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 01/29/14 10:27  
 Date Received: 02/07/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	1.02		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:47	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:47	EPA 3050B	1,6020A	PD
Cadmium, Total	0.312		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:47	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:47	EPA 3050B	1,6020A	PD
Lead, Total	3.05		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:47	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:06	EPA 7471B	1,7471B	PD
Nickel, Total	1.15		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:47	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403022-04  
 Client ID: FBB-METALS-1  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 01/29/14 13:31  
 Date Received: 02/07/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	ND		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:29	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:29	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:29	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:29	EPA 3050B	1,6020A	PD
Lead, Total	ND		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:29	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:09	EPA 7471B	1,7471B	PD
Nickel, Total	ND		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:29	EPA 3050B	1,6020A	PD



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**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG670740-1									
Arsenic, Total	ND	ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Beryllium, Total	ND	ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Cadmium, Total	ND	ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Chromium, Total	ND	ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Lead, Total	ND	ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Nickel, Total	ND	ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG670741-1									
Mercury, Total	ND	ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 12:55	1,7471B	PD

### Prep Information

Digestion Method: EPA 7471B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MONTGOMERY COUNTY RRF

**Project Number:** 200454.0000.0000

**Lab Number:** L1403022

**Report Date:** 02/21/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG670740-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	92		-		75-125	-		20
Beryllium, Total	86		-		75-125	-		20
Cadmium, Total	92		-		75-125	-		20
Chromium, Total	88		-		75-125	-		20
Lead, Total	93		-		75-125	-		20
Nickel, Total	90		-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG670741-2 SRM Lot Number: HPHGAA								
Mercury, Total	105		-		80-120	-		20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04    QC Batch ID: WG670740-4    QC Sample: L1403022-01    Client ID: B'VILLE-METALS-1-PRI												
Arsenic, Total	0.981	1800	1750	97		-	-		75-125	-		20
Beryllium, Total	ND	900	830	92		-	-		75-125	-		20
Cadmium, Total	0.351	900	915	102		-	-		75-125	-		20
Chromium, Total	ND	1800	1730	96		-	-		75-125	-		20
Lead, Total	2.79	1800	1880	104		-	-		75-125	-		20
Nickel, Total	1.38	1800	1770	98		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04    QC Batch ID: WG670741-4    QC Sample: L1403198-01    Client ID: MS Sample												
Mercury, Total	ND	1.125	1.16	103		-	-		80-120	-		20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: MONTGOMERY COUNTY RRF

Project Number: 200454.0000.0000

Lab Number: L1403022

Report Date: 02/21/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
<b>Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG670740-3 QC Sample: L1403022-01 Client ID: B'VILLE-METALS-1-PRI</b>						
Arsenic, Total	0.981	1.23	ug/filter	23	Q	20
Beryllium, Total	ND	ND	ug/filter	NC		20
Cadmium, Total	0.351	0.726	ug/filter	70	Q	20
Chromium, Total	ND	ND	ug/filter	NC		20
Lead, Total	2.79	3.18	ug/filter	13		20
Nickel, Total	1.38	1.47	ug/filter	6		20
<b>Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG670741-3 QC Sample: L1403198-01 Client ID: DUP Sample</b>						
Mercury, Total	ND	ND	ug/filter	NC		20

**AIR**

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403022-01  
 Client ID: B'VILLE-METALS-1-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe  
 Analytical Method: 106,IO-3.1  
 Analytical Date: 02/11/14 11:00  
 Analyst: LB

Date Collected: 01/29/14 13:31  
 Date Received: 02/07/14  
 Field Prep: Not Specified  
 Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303135		-		NA	1
Initial Sample Weight	4.5481		g		NA	1
Final Weight	4.5771		g		NA	1
Sample Weight	0.0290		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403022-02  
 Client ID: B'VILLE-METALS-1-COL  
 Sample Location: MARYLAND  
 Matrix: Wipe  
 Analytical Method: 106,IO-3.1  
 Analytical Date: 02/11/14 11:00  
 Analyst: LB

Date Collected: 01/29/14 13:31  
 Date Received: 02/07/14  
 Field Prep: Not Specified  
 Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303116		-		NA	1
Initial Sample Weight	4.5885		g		NA	1
Final Weight	4.6181		g		NA	1
Sample Weight	0.0296		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403022-03  
 Client ID: LUCK-METALS-1-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe  
 Analytical Method: 106,IO-3.1  
 Analytical Date: 02/11/14 11:00  
 Analyst: LB

Date Collected: 01/29/14 10:27  
 Date Received: 02/07/14  
 Field Prep: Not Specified  
 Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303134		-		NA	1
Initial Sample Weight	4.6031		g		NA	1
Final Weight	4.6431		g		NA	1
Sample Weight	0.0400		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF**Lab Number:** L1403022**Project Number:** 200454.0000.0000**Report Date:** 02/21/14**SAMPLE RESULTS**

**Lab ID:** L1403022-04  
**Client ID:** FBB-METALS-1  
**Sample Location:** MARYLAND  
**Matrix:** Wipe  
**Analytical Method:** 106,IO-3.1  
**Analytical Date:** 02/11/14 11:00  
**Analyst:** LB

**Date Collected:** 01/29/14 13:31  
**Date Received:** 02/07/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303117		-		NA	1
Initial Sample Weight	4.5819		g		NA	1
Final Weight	4.5800		g		NA	1
Sample Weight	-0.0019		g		NA	1

## Lab Duplicate Analysis

Batch Quality Control

Project Name: MONTGOMERY COUNTY RRF

Project Number: 200454.0000.0000

Lab Number: L1403022

Report Date: 02/21/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Suspended particulates, total (TSP) Associated sample(s): 01-04 QC Batch ID: WG671441-1 QC Sample: L1403022-01 Client ID: B'VILLE-METALS-1-PRI						
Final Weight	4.5771	4.5765	g	NC		

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

#### Cooler Information Custody Seal

##### Cooler

N/A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1403022-01A	Filter-PM10	N/A	N/A		Y	Absent	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1403022-02A	Filter-PM10	N/A	N/A		Y	Absent	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1403022-03A	Filter-PM10	N/A	N/A		Y	Absent	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1403022-04A	Filter-PM10	N/A	N/A		Y	Absent	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)

\*Values in parentheses indicate holding time in days



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

## 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.
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.

### 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

**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.
- 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.

**Report Format:** Data Usability Report



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

**Data Qualifiers**

- 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403022  
**Report Date:** 02/21/14

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 106 Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air. EPA/625/R-96/010a, June 1999.

## 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

Last revised December 11, 2013

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

#### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

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

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

#### Mansfield Facility

**EPA 8270D:** Biphenyl.

**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.

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### 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, SM4500CI-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.**

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





## ANALYTICAL REPORT

Lab Number:	L1403198
Client:	TRC Environmental Consultants Wannalancit Mills 650 Suffolk Street Lowell, MA 01854
ATTN:	Melita Lihzis
Phone:	(978) 656-3600
Project Name:	MONTGOMERY COUNTY RRF
Project Number:	200454.0000.0000
Report Date:	02/21/14

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1403198-01	B'VILLE-METALS-2-PRI	MARYLAND	02/07/14 16:46
L1403198-02	B'VILLE-METALS-2-COL	MARYLAND	02/07/14 16:46
L1403198-03	LUCK-METALS-2-PRI	MARYLAND	02/07/14 15:43
L1403198-04	FBB-METALS-2	MARYLAND	02/07/14 16:46

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

### 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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**Case Narrative (continued)**

Particulate in Air

WG671443-1 Duplicate: Per the method, one sample in ten is to be weighed in duplicate. This duplicate weighing is reported on the Lab Duplicate Analysis page of the report. The duplicate weight of the sample filter L1403198-01 was within the method criteria of 2.0 mg

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: 02/21/14

## METALS

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403198-01  
 Client ID: B'VILLE-METALS-2-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/07/14 16:46  
 Date Received: 02/11/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	1.20		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:31	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:31	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:31	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:31	EPA 3050B	1,6020A	PD
Lead, Total	3.96		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:31	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:12	EPA 7471B	1,7471B	PD
Nickel, Total	1.31		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:31	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403198-02  
 Client ID: B'VILLE-METALS-2-COL  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/07/14 16:46  
 Date Received: 02/11/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	1.10		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:32	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:32	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:32	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:32	EPA 3050B	1,6020A	PD
Lead, Total	3.88		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:32	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:30	EPA 7471B	1,7471B	PD
Nickel, Total	1.34		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:32	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403198-03  
 Client ID: LUCK-METALS-2-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/07/14 15:43  
 Date Received: 02/11/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	0.690		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:33	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:33	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:33	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:33	EPA 3050B	1,6020A	PD
Lead, Total	3.63		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:33	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:32	EPA 7471B	1,7471B	PD
Nickel, Total	1.44		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:33	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403198-04  
 Client ID: FBB-METALS-2  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/07/14 16:46  
 Date Received: 02/11/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	ND		ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:35	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:35	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:35	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:35	EPA 3050B	1,6020A	PD
Lead, Total	ND		ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:35	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 13:35	EPA 7471B	1,7471B	PD
Nickel, Total	ND		ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:35	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG670740-1									
Arsenic, Total	ND	ug/filter	0.450	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Beryllium, Total	ND	ug/filter	0.270	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Cadmium, Total	ND	ug/filter	0.180	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Chromium, Total	ND	ug/filter	45.0	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Lead, Total	ND	ug/filter	0.540	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD
Nickel, Total	ND	ug/filter	0.900	--	2	02/17/14 09:10	02/19/14 11:16	1,6020A	PD

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG670741-1									
Mercury, Total	ND	ug/filter	0.045	--	1	02/17/14 09:10	02/18/14 12:55	1,7471B	PD

### Prep Information

Digestion Method: EPA 7471B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MONTGOMERY COUNTY RRF

**Project Number:** 200454.0000.0000

**Lab Number:** L1403198

**Report Date:** 02/21/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG670740-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	92		-		75-125	-		20
Beryllium, Total	86		-		75-125	-		20
Cadmium, Total	92		-		75-125	-		20
Chromium, Total	88		-		75-125	-		20
Lead, Total	93		-		75-125	-		20
Nickel, Total	90		-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG670741-2 SRM Lot Number: HPHGAA								
Mercury, Total	105		-		80-120	-		20

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04    QC Batch ID: WG670740-4    QC Sample: L1403022-01    Client ID: MS Sample												
Arsenic, Total	0.981	1800	1750	97		-	-		75-125	-		20
Beryllium, Total	ND	900	830	92		-	-		75-125	-		20
Cadmium, Total	0.351	900	915	102		-	-		75-125	-		20
Chromium, Total	ND	1800	1730	96		-	-		75-125	-		20
Lead, Total	2.79	1800	1880	104		-	-		75-125	-		20
Nickel, Total	1.38	1800	1770	98		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04    QC Batch ID: WG670741-4    QC Sample: L1403198-01    Client ID: B'VILLE-METALS-2-PRI												
Mercury, Total	ND	1.125	1.16	103		-	-		80-120	-		20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: MONTGOMERY COUNTY RRF

Project Number: 200454.0000.0000

Lab Number: L1403198

Report Date: 02/21/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
<b>Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG670740-3 QC Sample: L1403022-01 Client ID: DUP Sample</b>						
Arsenic, Total	0.981	1.23	ug/filter	23	Q	20
Beryllium, Total	ND	ND	ug/filter	NC		20
Cadmium, Total	0.351	0.726	ug/filter	70	Q	20
Chromium, Total	ND	ND	ug/filter	NC		20
Lead, Total	2.79	3.18	ug/filter	13		20
Nickel, Total	1.38	1.47	ug/filter	6		20
<b>Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG670741-3 QC Sample: L1403198-01 Client ID: B'VILLE-METALS-2-PRI</b>						
Mercury, Total	ND	ND	ug/filter	NC		20

**AIR**

**Project Name:** MONTGOMERY COUNTY RRF**Lab Number:** L1403198**Project Number:** 200454.0000.0000**Report Date:** 02/21/14**SAMPLE RESULTS**

**Lab ID:** L1403198-01  
**Client ID:** B'VILLE-METALS-2-PRI  
**Sample Location:** MARYLAND  
**Matrix:** Wipe  
**Analytical Method:** 106,IO-3.1  
**Analytical Date:** 02/12/14 14:00  
**Analyst:** LB

**Date Collected:** 02/07/14 16:46  
**Date Received:** 02/11/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303120		-		NA	1
Initial Sample Weight	4.5484		g		NA	1
Final Weight	4.5733		g		NA	1
Sample Weight	0.0249		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403198-02  
 Client ID: B'VILLE-METALS-2-COL  
 Sample Location: MARYLAND  
 Matrix: Wipe  
 Analytical Method: 106,IO-3.1  
 Analytical Date: 02/12/14 14:00  
 Analyst: LB

Date Collected: 02/07/14 16:46  
 Date Received: 02/11/14  
 Field Prep: Not Specified  
 Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303119		-		NA	1
Initial Sample Weight	4.5796		g		NA	1
Final Weight	4.6096		g		NA	1
Sample Weight	0.0300		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**SAMPLE RESULTS**

Lab ID: L1403198-03  
 Client ID: LUCK-METALS-2-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe  
 Analytical Method: 106,IO-3.1  
 Analytical Date: 02/12/14 14:00  
 Analyst: LB

Date Collected: 02/07/14 15:43  
 Date Received: 02/11/14  
 Field Prep: Not Specified  
 Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303118		-		NA	1
Initial Sample Weight	4.6201		g		NA	1
Final Weight	4.6686		g		NA	1
Sample Weight	0.0485		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF**Lab Number:** L1403198**Project Number:** 200454.0000.0000**Report Date:** 02/21/14**SAMPLE RESULTS**

**Lab ID:** L1403198-04  
**Client ID:** FBB-METALS-2  
**Sample Location:** MARYLAND  
**Matrix:** Wipe  
**Analytical Method:** 106,IO-3.1  
**Analytical Date:** 02/12/14 14:00  
**Analyst:** LB

**Date Collected:** 02/07/14 16:46  
**Date Received:** 02/11/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303122		-		NA	1
Initial Sample Weight	4.5705		g		NA	1
Final Weight	4.5722		g		NA	1
Sample Weight	0.0017		g		NA	1

## Lab Duplicate Analysis

Batch Quality Control

Project Name: MONTGOMERY COUNTY RRF

Project Number: 200454.0000.0000

Lab Number: L1403198

Report Date: 02/21/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Suspended particulates, total (TSP) Associated sample(s): 01-04 QC Batch ID: WG671443-1 QC Sample: L1403198-01 Client ID: B'VILLE-METALS-2-PRI						
Final Weight	4.5733	4.5738	g	NC		

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

#### Cooler Information Custody Seal

##### Cooler

N/A Present/Intact

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1403198-01A	Filter-PM10	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1403198-02A	Filter-PM10	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1403198-03A	Filter-PM10	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1403198-04A	Filter-PM10	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)

\*Values in parentheses indicate holding time in days

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

## 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.
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.

### 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

**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.
- 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.

**Report Format:** Data Usability Report



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

**Data Qualifiers**

- 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1403198  
**Report Date:** 02/21/14

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 106 Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air. EPA/625/R-96/010a, June 1999.

## 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

Last revised December 11, 2013

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

#### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

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

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

#### Mansfield Facility

**EPA 8270D:** Biphenyl.

**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.

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### 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, SM4500CI-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,

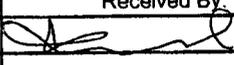
**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

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

 <b>AIR ANALYSIS - SORBENT MEDIA</b> <b>CHAIN OF CUSTODY</b>		Page	of		5/17/17 11:56		ALPHA Job# 1903198																	
		Project Information		Report Information - Data Deliverables				Billing Information																
Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288		Mansfield, MA TEL: 508-822-9300 508-822-3288		Project Name: Montgomery County RRF Project Location: Maryland Project # 200454.0000.0000 (Use Project name as Project #) <input type="checkbox"/>		<input type="checkbox"/> FAX <input type="checkbox"/> ADEx Criteria Checker: Other Formats: <input type="checkbox"/> EMAIL <input type="checkbox"/> Add'l Deliverables		<input type="checkbox"/> Same as Client Info PO #																
Client Information Client: TRC Environmental Address: 21 Griffin Road North Windsor, CT Phone: Fax: Email: ghunt@trcsolutions.com		Project Manager: ALPHA Quote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> Time:		Report to: (if different than Project Manager) ghunt@trcsolutions.com		Regulatory Requirements/Report Limits <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:33%;">State/Fed</th> <th style="width:33%;">Program</th> <th style="width:33%;">Criteria</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>				State/Fed	Program	Criteria												
State/Fed	Program	Criteria																						
These samples have been previously analyzed by Alpha <input type="checkbox"/>					<b>ANALYSIS</b>					NOTE: For metals, please specify elements of interest and media type. <input type="checkbox"/> PM-10 <input checked="" type="checkbox"/> TSP <input type="checkbox"/> MCE														
Other Project Specific Requirements/ Comments/Detection Limits please remove at least a 47mm punch sized portion for secondary XRF analysis at Chester LabNet in Tigard, OR. do not analyze back-up samples unless directed by Gary Hunt or Melita Lihzis				For PCBs, selection is REQUIRED: <input type="checkbox"/> Congeners <input type="checkbox"/> Homologs <input type="checkbox"/> Aroclors (Low Vol only)			TO-13A PCBs (High Vol) PCBs (Low Vol) TO-11A Hg via NIOSH 6009 Mod. Metals TO-17																	
<b>All Columns Below Must Be Filled Out</b>										Sample Comments (i.e. PID)														
Sample ID	2014 Date	Collection Start Time	Collection End Time	Flow Rate (L/min)	Total Volume (L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A			PCBs (High Vol)	PCBs (Low Vol)	TO-11A	Hg via NIOSH 6009 Mod.	Metals	TO-17							
B'ville-Metals- 2 -Pri	2-6-27	17:46	16:46			AA	SB							X		Volume:								
B'ville-Metals- 2 -Col	2/6-27	17:46	16:46			AA	SB							X		Volume:								
Luck-Metals- 2 -Pri	2/6-27	16:43	15:43			AA	SB							X		Volume:								
FBB-Metals- 2	2/6-27	17:46	16:46			AA	SB							X		Field Blank								
										Media Type	P	P	P	D	T	F	T							
Media Code D = DNPH Cartridge F = Filter P = PUF Cartridge T = Sorbent Tube O = Other		Relinquished By: Stephen Boyle		Date/Time: 2-9-17/17:00		Received By: 		Date/Time: 2-11-14 0940		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)														
Form No: 101-13 (rev 01-OCT-2013)																								



## ANALYTICAL REPORT

Lab Number:	L1404480
Client:	TRC Environmental Consultants Wannalancit Mills 650 Suffolk Street Lowell, MA 01854
ATTN:	Melita Lihzis
Phone:	(978) 656-3600
Project Name:	MONTGOMERY COUNTY RRF
Project Number:	200454.0000.0000
Report Date:	03/13/14

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1404480-01	B'VILLE-METALS-3-PRI	MARYLAND	02/27/14 14:34
L1404480-02	B'VILLE-METALS-3-COL	MARYLAND	02/27/14 14:34
L1404480-03	LUCK-METALS-3-PRI	MARYLAND	02/27/14 11:20
L1404480-04	FBB-METALS-3	MARYLAND	02/27/14 14:34

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

### 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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

**Case Narrative (continued)**

Particulates 10 microns or larger in Air (PM 10)

WG673578-1 Duplicate: Per the method, one sample in ten is to be weighed in duplicate. This duplicate weighing is reported on the Lab Duplicate Analysis page of the report. The duplicate weight of the sample filter L1404480-01 was within the method criteria of 2.0 mg.

Total Metals

The WG674454-3 Laboratory Duplicate RPD, performed on sample L1404480-01, is above the acceptance criteria for Nickel, total (44%); however, the sample and duplicate results are less than five times the reporting limit; therefore, the RPD is accepted.

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: 03/13/14

## METALS

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

**SAMPLE RESULTS**

Lab ID: L1404480-01  
 Client ID: B'VILLE-METALS-3-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/27/14 14:34  
 Date Received: 03/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	0.609		ug/filter	0.450	--	2	03/10/14 10:00	03/11/14 14:23	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	03/10/14 10:00	03/11/14 14:23	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		ug/filter	0.180	--	2	03/10/14 10:00	03/11/14 14:23	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	03/10/14 10:00	03/11/14 14:23	EPA 3050B	1,6020A	PD
Lead, Total	3.22		ug/filter	0.540	--	2	03/10/14 10:00	03/11/14 14:23	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	03/10/14 10:00	03/12/14 14:02	EPA 7471B	1,7471B	PD
Nickel, Total	1.91		ug/filter	0.900	--	2	03/10/14 10:00	03/11/14 14:23	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

**SAMPLE RESULTS**

Lab ID: L1404480-02  
 Client ID: B'VILLE-METALS-3-COL  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/27/14 14:34  
 Date Received: 03/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	0.719		ug/filter	0.450	--	2	03/10/14 10:00	03/11/14 14:25	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	03/10/14 10:00	03/11/14 14:25	EPA 3050B	1,6020A	PD
Cadmium, Total	0.233		ug/filter	0.180	--	2	03/10/14 10:00	03/11/14 14:25	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	03/10/14 10:00	03/11/14 14:25	EPA 3050B	1,6020A	PD
Lead, Total	3.39		ug/filter	0.540	--	2	03/10/14 10:00	03/11/14 14:25	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	03/10/14 10:00	03/12/14 14:05	EPA 7471B	1,7471B	PD
Nickel, Total	1.67		ug/filter	0.900	--	2	03/10/14 10:00	03/11/14 14:25	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

**SAMPLE RESULTS**

Lab ID: L1404480-03  
 Client ID: LUCK-METALS-3-PRI  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/27/14 11:20  
 Date Received: 03/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	0.652		ug/filter	0.450	--	2	03/10/14 10:00	03/11/14 14:26	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	03/10/14 10:00	03/11/14 14:26	EPA 3050B	1,6020A	PD
Cadmium, Total	0.229		ug/filter	0.180	--	2	03/10/14 10:00	03/11/14 14:26	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	03/10/14 10:00	03/11/14 14:26	EPA 3050B	1,6020A	PD
Lead, Total	3.88		ug/filter	0.540	--	2	03/10/14 10:00	03/11/14 14:26	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	03/10/14 10:00	03/12/14 14:17	EPA 7471B	1,7471B	PD
Nickel, Total	1.68		ug/filter	0.900	--	2	03/10/14 10:00	03/11/14 14:26	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

**SAMPLE RESULTS**

Lab ID: L1404480-04  
 Client ID: FBB-METALS-3  
 Sample Location: MARYLAND  
 Matrix: Wipe

Date Collected: 02/27/14 14:34  
 Date Received: 03/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	ND		ug/filter	0.450	--	2	03/10/14 10:00	03/11/14 14:18	EPA 3050B	1,6020A	PD
Beryllium, Total	ND		ug/filter	0.270	--	2	03/10/14 10:00	03/11/14 14:18	EPA 3050B	1,6020A	PD
Cadmium, Total	ND		ug/filter	0.180	--	2	03/10/14 10:00	03/11/14 14:18	EPA 3050B	1,6020A	PD
Chromium, Total	ND		ug/filter	45.0	--	2	03/10/14 10:00	03/11/14 14:18	EPA 3050B	1,6020A	PD
Lead, Total	ND		ug/filter	0.540	--	2	03/10/14 10:00	03/11/14 14:18	EPA 3050B	1,6020A	PD
Mercury, Total	ND		ug/filter	0.045	--	1	03/10/14 10:00	03/12/14 14:20	EPA 7471B	1,7471B	PD
Nickel, Total	ND		ug/filter	0.900	--	2	03/10/14 10:00	03/11/14 14:18	EPA 3050B	1,6020A	PD



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG674454-1									
Arsenic, Total	ND	ug/filter	0.450	--	2	03/10/14 10:00	03/11/14 14:05	1,6020A	PD
Beryllium, Total	ND	ug/filter	0.270	--	2	03/10/14 10:00	03/11/14 14:05	1,6020A	PD
Cadmium, Total	ND	ug/filter	0.180	--	2	03/10/14 10:00	03/11/14 14:05	1,6020A	PD
Chromium, Total	ND	ug/filter	45.0	--	2	03/10/14 10:00	03/11/14 14:05	1,6020A	PD
Lead, Total	ND	ug/filter	0.540	--	2	03/10/14 10:00	03/11/14 14:05	1,6020A	PD
Nickel, Total	ND	ug/filter	0.900	--	2	03/10/14 10:00	03/11/14 14:05	1,6020A	PD

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG674458-1									
Mercury, Total	ND	ug/filter	0.045	--	1	03/10/14 10:00	03/12/14 13:56	1,7471B	PD

### Prep Information

Digestion Method: EPA 7471B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MONTGOMERY COUNTY RRF

**Project Number:** 200454.0000.0000

**Lab Number:** L1404480

**Report Date:** 03/13/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG674454-2 SRM Lot Number: A2METSPIKE								
Arsenic, Total	82		-		75-125	-		20
Beryllium, Total	83		-		75-125	-		20
Cadmium, Total	85		-		75-125	-		20
Chromium, Total	79		-		75-125	-		20
Lead, Total	86		-		75-125	-		20
Nickel, Total	82		-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG674458-2 SRM Lot Number: HPHGAA								
Mercury, Total	108		-		80-120	-		20

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04    QC Batch ID: WG674454-4    QC Sample: L1404480-01    Client ID: B'VILLE-METALS-3-PRI												
Arsenic, Total	0.609	1800	1600	89		-	-		75-125	-		20
Beryllium, Total	ND	900	768	85		-	-		75-125	-		20
Cadmium, Total	ND	900	768	85		-	-		75-125	-		20
Chromium, Total	ND	1800	1560	87		-	-		75-125	-		20
Lead, Total	3.22	1800	1590	88		-	-		75-125	-		20
Nickel, Total	1.91	1800	1560	87		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04    QC Batch ID: WG674458-4    QC Sample: L1404480-02    Client ID: B'VILLE-METALS-3-COL												
Mercury, Total	ND	1.125	1.23	109		-	-		80-120	-		20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: MONTGOMERY COUNTY RRF

Project Number: 200454.0000.0000

Lab Number: L1404480

Report Date: 03/13/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
<b>Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG674454-3 QC Sample: L1404480-01 Client ID: B'VILLE-METALS-3-PRI</b>						
Arsenic, Total	0.609	0.575	ug/filter	6		20
Beryllium, Total	ND	ND	ug/filter	NC		20
Cadmium, Total	ND	ND	ug/filter	NC		20
Chromium, Total	ND	ND	ug/filter	NC		20
Lead, Total	3.22	2.84	ug/filter	13		20
Nickel, Total	1.91	1.22	ug/filter	44	Q	20
<b>Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG674458-3 QC Sample: L1404480-02 Client ID: B'VILLE-METALS-3-COL</b>						
Mercury, Total	ND	ND	ug/filter	NC		20

**AIR**

**Project Name:** MONTGOMERY COUNTY RRF**Lab Number:** L1404480**Project Number:** 200454.0000.0000**Report Date:** 03/13/14**SAMPLE RESULTS**

**Lab ID:** L1404480-01  
**Client ID:** B'VILLE-METALS-3-PRI  
**Sample Location:** MARYLAND  
**Matrix:** Wipe  
**Analytical Method:** 106,IO-3.1  
**Analytical Date:** 03/06/14 17:00  
**Analyst:** LB

**Date Collected:** 02/27/14 14:34  
**Date Received:** 03/04/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303124		-		NA	1
Initial Sample Weight	4.6049		g		NA	1
Final Weight	4.6348		g		NA	1
Sample Weight	0.0299		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF**Lab Number:** L1404480**Project Number:** 200454.0000.0000**Report Date:** 03/13/14**SAMPLE RESULTS**

**Lab ID:** L1404480-02  
**Client ID:** B'VILLE-METALS-3-COL  
**Sample Location:** MARYLAND  
**Matrix:** Wipe  
**Analytical Method:** 106,IO-3.1  
**Analytical Date:** 03/06/14 17:00  
**Analyst:** LB

**Date Collected:** 02/27/14 14:34  
**Date Received:** 03/04/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303125		-		NA	1
Initial Sample Weight	4.6189		g		NA	1
Final Weight	4.6533		g		NA	1
Sample Weight	0.0344		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF**Lab Number:** L1404480**Project Number:** 200454.0000.0000**Report Date:** 03/13/14**SAMPLE RESULTS**

**Lab ID:** L1404480-03  
**Client ID:** LUCK-METALS-3-PRI  
**Sample Location:** MARYLAND  
**Matrix:** Wipe  
**Analytical Method:** 106,IO-3.1  
**Analytical Date:** 03/06/14 17:00  
**Analyst:** LB

**Date Collected:** 02/27/14 11:20  
**Date Received:** 03/04/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303123		-		NA	1
Initial Sample Weight	4.5547		g		NA	1
Final Weight	4.5929		g		NA	1
Sample Weight	0.0382		g		NA	1

**Project Name:** MONTGOMERY COUNTY RRF**Lab Number:** L1404480**Project Number:** 200454.0000.0000**Report Date:** 03/13/14**SAMPLE RESULTS**

**Lab ID:** L1404480-04  
**Client ID:** FBB-METALS-3  
**Sample Location:** MARYLAND  
**Matrix:** Wipe  
**Analytical Method:** 106,IO-3.1  
**Analytical Date:** 03/06/14 17:00  
**Analyst:** LB

**Date Collected:** 02/27/14 14:34  
**Date Received:** 03/04/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Suspended particulates, total (TSP)						
Filter Number	303127		-		NA	1
Initial Sample Weight	4.6282		g		NA	1
Final Weight	4.6285		g		NA	1
Sample Weight	0.0003		g		NA	1

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Suspended particulates, total (TSP) Associated sample(s): 01-04 QC Batch ID: WG673578-1 QC Sample: L1404480-01 Client ID: B'VILLE-METALS-3-PRI						
Final Weight	4.6348	4.6351	g	NC		

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

#### Cooler Information Custody Seal

##### Cooler

N/A Present/Intact

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1404480-01A	Filter-TSP	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1404480-02A	Filter-TSP	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1404480-03A	Filter-TSP	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)
L1404480-04A	Filter-TSP	N/A	N/A		Y	Present/Intact	A2-PM10-CD-6020T(180),A2-PM10-CR-6020T(180),A2-PM10-NI-6020T(180),A2-PM10-HG-7471T(28),A2-PM10-AS-6020T(180),PARTICULATE-TSP(),A2-PM10-BE-6020T(180),A2-PM10-PB-6020T(180)

\*Values in parentheses indicate holding time in days

**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

## 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.
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.

### 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

**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.
- 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.

**Report Format:** Data Usability Report



**Project Name:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

**Data Qualifiers**

- 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:** MONTGOMERY COUNTY RRF  
**Project Number:** 200454.0000.0000

**Lab Number:** L1404480  
**Report Date:** 03/13/14

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 106 Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air. EPA/625/R-96/010a, June 1999.

## 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

Last revised December 11, 2013

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

#### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

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

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

#### Mansfield Facility

**EPA 8270D:** Biphenyl.

**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.

### 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, SM4500CI-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.

<b>AIR ANALYSIS - SORBENT MEDIA</b> CHAIN OF CUSTODY		Page of	Date Rec'd in Lab <b>3-4-14</b>		ALPHA Job # <b>L1404480</b>														
		Project Information		Report Information - Data Deliverables		Billing Information													
Westborough, MA    Mansfield, MA TEL: 508-898-9220    TEL: 508-822-9300 FAX: 508-822-3288    508-822-3288		Project Name: Montgomery County RRF		<input type="checkbox"/> FAX <input type="checkbox"/> ADEx Criteria Checker: Other Formats: <input type="checkbox"/> EMAIL <input type="checkbox"/> Add'l Deliverables		<input type="checkbox"/> Same as Client Info PO #													
Client Information		Project # 200454.0000.0000		Regulatory Requirements/Report Limits		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">State/Fed</th> <th style="width: 33%;">Program</th> <th style="width: 33%;">Criteria</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		State/Fed	Program	Criteria									
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Client: TRC Environmental		(Use Project name as Project #) <input type="checkbox"/>		Report to: (if different than Project Manager) ghunt@trcsolutions.com		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">State/Fed</th> <th style="width: 33%;">Program</th> <th style="width: 33%;">Criteria</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		State/Fed	Program	Criteria									
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Address: 21 Griffin Road North		Project Manager:		Turn-Around Time		Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> Time:													
Windsor, CT		ALPHA Quote #:		These samples have been previously analyzed by Alpha <input type="checkbox"/>		ANALYSIS													
Phone:		Turn-Around Time		Other Project Specific Requirements/ Comments/Detection Limits please remove at least a 47mm punch sized portion for secondary XRF analysis at Chester LabNet in Tigard, OR. do not analyze back-up samples unless directed by Gary Hunt or Melita Lihzis		For PCBs, selection is REQUIRED: <input type="checkbox"/> Congeners <input type="checkbox"/> Homologs <input type="checkbox"/> Aroclors (Low Vol only)													
Fax:		Standard <input checked="" type="checkbox"/> Due Date:		NOTE: For metals, please specify elements of interest and media type. <input type="checkbox"/> PM-10 <input checked="" type="checkbox"/> TSP <input type="checkbox"/> MCE		Sample Comments (i.e. PID)													
Email: ghunt@trcsolutions.com		Rush (only if pre approved) <input type="checkbox"/> Time:		All Columns Below Must Be Filled Out		TO-13A    PCBs (High Vol)    PCBs (Low Vol)    TO-11A    Hg via NIOSH 6009 Mod.    Metals    TO-17													
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection		Flow Rate (L/min)    Total Volume (L)    Sample Matrix*    Sampler's Initials    Media ID# (1)		TO-13A    PCBs (High Vol)    PCBs (Low Vol)    TO-11A    Hg via NIOSH 6009 Mod.    Metals    TO-17		Sample Comments (i.e. PID)									
-01		B'ville-Metals- 3 -Pri		2/26/27 14:34 14:34		AA SB				Volume:									
-02		B'ville-Metals- 3 -Col		2/26/27 14:34 14:34		AA SB				Volume:									
-03		Luck-Metals- 3 -Pri		2/26/27 11:20 11:20		AA SD				Volume:									
-04		FBB-Metals- 3		2/26/27 14:34 14:34		AA SB				Field Blank									
* SAMPLE MATRIX CODES		AA = Ambient Air (Indoor/Outdoor) SV = Soil Vapor/Landfill Gas/SVE Other = Please Specify		(1) Required for PUF cartridges, PM-10 and TSP filters and TO-17 sorbent tubes.		Media Type		P    P    P    D    T    F    T		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)									
Media Code D = DNPH Cartridge F = Filter P = PUF Cartridge T = Sorbent Tube O = Other		Relinquished By:		Date/Time		Received By:		Date/Time		(See reverse side.)									
Form No: 101-13 (rev 01-OCT-2013)		Stephen Bayko		3-3-14 11:00		[Signature]		3-4-14 1023		(See reverse side.)									