



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1710047

Client Name: APEX Companies, LLC. -Manassas
8854 Rixlew Lane
Manassas, VA 20109

Date Received: September 1, 2017 13:00

Date Issued: September 7, 2017 14:15

Project Number: [none]

Submitted To: William Thomas

Purchase Order:

Client Site I.D.: Drew MS

Enclosed are the results of analyses for samples received by the laboratory on 09/01/2017 13:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





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Client Name: APEX Companies, LLC. -Manassas Date Issued: 9/7/2017 14:15
8854 Rixlew Lane
Manassas VA, 20109

Submitted To: William Thomas Project Number: [none]
Client Site I.D.: Drew MS Purchase Order:

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 1710047

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EDM2-BS-GL4	1710047-01	Drinking Water	09/01/2017 06:20	09/01/2017 13:00
EDM2-BS-KT1	1710047-02	Drinking Water	09/01/2017 06:24	09/01/2017 13:00
EDM2-CS1-RM21	1710047-03	Drinking Water	09/01/2017 06:29	09/01/2017 13:00
EDM2-CS2- RM22	1710047-04	Drinking Water	09/01/2017 06:31	09/01/2017 13:00
EDM2-Field Blank	1710047-05	Drinking Water	09/01/2017 06:36	09/01/2017 13:00



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Submitted To:	William Thomas	Project Number:	[none]
Client Site I.D.:	Drew MS	Purchase Order:	

Laboratory Order ID: 1710047

Analytical Results

Sample I.D. EDM2-BS-GL4	Laboratory Sample ID: 1710047-01
Grab Date/Time: 09/01/2017 06:20	

Parameter	Samp ID	Method	Result	Reporting Qual	Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
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Metals (Total) by EPA 200 Series Methods

Lead	01	EPA200.8 R5.4	92.6 ug/L	1.00	1	09/05/17 13:50	09/06/17 13:30	BG
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Laboratory Order ID: 1710047

Analytical Results

Sample I.D. EDM2-BS-KT1	Laboratory Sample ID: 1710047-02
Grab Date/Time: 09/01/2017 06:24	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
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Metals (Total) by EPA 200 Series Methods

Lead	02	EPA200.8 R5.4	5.79 ug/L	1.00	1	09/05/17 13:50	09/06/17 13:34	BG
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Submitted To:	William Thomas	Project Number:	[none]
Client Site I.D.:	Drew MS	Purchase Order:	

Laboratory Order ID: 1710047

Analytical Results

Sample I.D. EDM2-CS1-RM21	Laboratory Sample ID: 1710047-03
Grab Date/Time: 09/01/2017 06:29	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
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Metals (Total) by EPA 200 Series Methods

Lead	03	EPA200.8 R5.4	3.50 ug/L	1.00	1	09/05/17 13:50	09/06/17 13:45	BG
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Submitted To:	William Thomas	Project Number:	[none]
Client Site I.D.:	Drew MS	Purchase Order:	

Laboratory Order ID: 1710047

Analytical Results

Sample I.D. EDM2-CS2- RM22	Laboratory Sample ID: 1710047-04
Grab Date/Time: 09/01/2017 06:31	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
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Metals (Total) by EPA 200 Series Methods

Lead	04	EPA200.8 R5.4	2.00 ug/L	1.00	1	09/05/17 13:50	09/06/17 13:49	BG
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Submitted To: William Thomas	Project Number: [none]
Client Site I.D.: Drew MS	Purchase Order:

Laboratory Order ID: 1710047

Analytical Results

Sample I.D. EDM2-Field Blank	Laboratory Sample ID: 1710047-05
Grab Date/Time: 09/01/2017 06:36	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
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Metals (Total) by EPA 200 Series Methods

Lead	05	EPA200.8 R5.4	<1.00 ug/L	1.00	1	09/05/17 13:50	09/06/17 13:52	BG
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Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 200 Series Methods		Preparation Method: EPA200.8 R5.4			
1710047-01	50.0 mL / 50.0 mL	EPA200.8 R5.4	BAI0059	SAI0100	AI70016
1710047-02	50.0 mL / 50.0 mL	EPA200.8 R5.4	BAI0059	SAI0100	AI70016
1710047-03	50.0 mL / 50.0 mL	EPA200.8 R5.4	BAI0059	SAI0100	AI70016
1710047-04	50.0 mL / 50.0 mL	EPA200.8 R5.4	BAI0059	SAI0100	AI70016
1710047-05	50.0 mL / 50.0 mL	EPA200.8 R5.4	BAI0059	SAI0100	AI70016



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Client Site I.D.:	Drew MS	Purchase Order:	

Metals (Total) by EPA 200 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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Batch BAI0059 - EPA200.8 R5.4

Blank (BAI0059-BLK1)				Prepared: 09/05/2017 Analyzed: 09/06/2017						
Lead	<1.00 ug/L	1.00	ug/L							
LCS (BAI0059-BS1)				Prepared: 09/05/2017 Analyzed: 09/06/2017						
Lead	49.9 ug/L	1.00	ug/L	50.0	ug/L	99.9	85-115			
LCS Dup (BAI0059-BSD1)				Prepared: 09/05/2017 Analyzed: 09/06/2017						
Lead	50.2 ug/L	1.00	ug/L	50.0	ug/L	100	85-115	0.564	20	
Matrix Spike (BAI0059-MS1)				Source: 1710042-05 Prepared: 09/05/2017 Analyzed: 09/06/2017						
Lead	48.5 ug/L	1.00	ug/L	50.0	1.84 ug/L	93.3	70-130			
Matrix Spike (BAI0059-MS2)				Source: 1710047-05 Prepared: 09/05/2017 Analyzed: 09/06/2017						
Lead	48.9 ug/L	1.00	ug/L	50.0	<1.00 ug/L	97.8	70-130			
Matrix Spike Dup (BAI0059-MSD1)				Source: 1710042-05 Prepared: 09/05/2017 Analyzed: 09/06/2017						
Lead	47.7 ug/L	1.00	ug/L	50.0	1.84 ug/L	91.6	70-130	1.71	20	
Matrix Spike Dup (BAI0059-MSD2)				Source: 1710047-05 Prepared: 09/05/2017 Analyzed: 09/06/2017						
Lead	48.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	97.2	70-130	0.592	20	



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Certified Analyses included in this Report

Analyte	Certifications		
<i>EPA200.8 R5.4 in Potable Water</i>			
Lead	VELAP		
Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2017
NC	North Carolina DENR	495	12/31/2017
PADEP	NELAC-Pennsylvania	001	10/31/2017
VELAP	NELAC-Virginia Certificate #9316	460021	06/14/2018
WVDEP	West Virginia DEP	350	11/30/2017



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Summary of Data Qualifiers

RPD Relative Percent Difference
Qual Qualifiers
-RE Denotes sample was re-analyzed
D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library .
A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: Apex Manassas	INVOICE TO: Apex Manassas	PROJECT NAME: Stafford Schools-Pb in DW
CONTACT: William Thomas	INVOICE CONTACT: William Thomas	SITE NAME: <u>Ferry Farm ES Drew MS</u>
ADDRESS: 8854 Rixlew Lane, Manassas, VA 20109	INVOICE ADDRESS: Same	PROJECT NUMBER:
PHONE #: 1-703-396-6730	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: <u>Wthomas@apexcos.com</u>	Pretreatment Program:
Is sample for compliance reporting? YES NO	Is sample from a chlorinated supply? YES NO	PWS I.D. #:
SAMPLER NAME (PRINT): <u>Richard McBride</u> <u>Andrew Hughes</u>	SAMPLER SIGNATURE: <u>[Signature]</u>	Turn Around Time: 10 Days

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)								COMMENTS		
											Pb 200.8										
1) <u>EDM2-BS-GL4</u>	X			<u>9/1</u>	<u>6:20</u>				DW	1	X										Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol Samples are to be preserved with HNO3 upon arrival to the lab PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)
2) <u>EDM2 BS-KT1</u>	X				<u>6:24</u>				DW	1	X										
3) <u>EDM2-CS1-RM21</u>	X				<u>6:29</u>				DW	1	X										
4) <u>EDM2-CS2-RM22</u>	X				<u>6:31</u>				DW	1	X										
5) <u>EDM2-Field Blank</u>	X				<u>6:36</u>				DW	1	X										
6)	X								DW	1	X										
7)	X								DW	1	X										
8)	X								DW	1	X										
9)	X								DW	1	X										
10)	X								DW	1	X										

RELINQUISHED: <u>[Signature]</u>	DATE / TIME: <u>9/1 9:35</u>	RECEIVED: <u>[Signature]</u>	DATE / TIME: <u>9/1 9:35</u>	QC Data Package	LAB USE ONLY	COOLER TEMP <u>22.5</u> °C
RELINQUISHED: <u>[Signature]</u>	DATE / TIME: <u>9/1 11:00</u>	RECEIVED: <u>Bob Marshall</u>	DATE / TIME: <u>9-1-17 11:00</u>	Level III <input type="checkbox"/>	APEX-Manassas 1710047 SCPS - Drew MS Recd: 09/01/2017 Due: 09/18/2017	
RELINQUISHED: <u>Bob Marshall</u>	DATE / TIME: <u>9-1-17 1:00</u>	RECEIVED: <u>Ben Rill</u>	DATE / TIME: <u>9/1/17 1300</u>	Level IV <input type="checkbox"/>		

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Submitted To:	William Thomas	Project Number:	[none]
Client Site I.D.:	Drew MS	Purchase Order:	

Sample Conditions Checklist

Samples Received at:	22.50°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	No
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

Per Will Thomas, TAT is 5 days. KLC 9/6/2017 11:33.