



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

May 22, 2017

Mr. Patrick McGuinness  
RK Occ. & Env. Analysis, Inc.  
401 St. James Avenue  
Phillipsburg, NJ 08865

## Certificate of Analysis

Project Name: <b>Lead &amp; Copper in DW</b>	Workorder: <b>2229978</b>
Purchase Order:	Workorder ID: <b>17-013 Washington Twp BOE</b>

Dear Mr. McGuinness:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 12, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Ms. Shannon Butler  
Project Coordinator

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

### ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

### SAMPLE SUMMARY

Workorder: 2229978 17-013 Washington Twp BOE

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2229978001	050517-01	Drinking Water	5/5/2017 06:40	5/12/2017 19:50	Collected by Client
2229978002	050517-02	Drinking Water	5/5/2017 06:44	5/12/2017 19:50	Collected by Client
2229978003	050517-03	Drinking Water	5/5/2017 06:58	5/12/2017 19:50	Collected by Client
2229978004	050517-04	Drinking Water	5/5/2017 07:01	5/12/2017 19:50	Collected by Client

### ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
 Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

**SAMPLE SUMMARY**

Workorder: 2229978 17-013 Washington Twp BOE

**Notes**

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

**ALS Environmental Laboratory Locations Across North America**Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

**ANALYTICAL RESULTS**

Workorder: 2229978 17-013 Washington Twp BOE

Lab ID: 2229978001 Date Collected: 5/5/2017 06:40 Matrix: Drinking Water  
Sample ID: 050517-01 Date Received: 5/12/2017 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>METALS</b>										
Copper, Total	0.14		mg/L	0.0050	EPA 200.8	5/19/17 09:11	MO	5/19/17 10:48	MO	A1
Lead, Total	0.0049		mg/L	0.0020	EPA 200.8	5/19/17 09:11	MO	5/19/17 10:48	MO	A1

*Shannon Butler*  
Ms. Shannon Butler  
Project Coordinator

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

**ANALYTICAL RESULTS**

Workorder: 2229978 17-013 Washington Twp BOE

Lab ID: 2229978002 Date Collected: 5/5/2017 06:44 Matrix: Drinking Water  
Sample ID: 050517-02 Date Received: 5/12/2017 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>METALS</b>										
Copper, Total	0.062		mg/L	0.0050	EPA 200.8	5/19/17 09:42	MO	5/19/17 10:59	MO	A1
Lead, Total	ND		mg/L	0.0020	EPA 200.8	5/19/17 09:42	MO	5/19/17 10:59	MO	A1

*Shannon Butler*  
Ms. Shannon Butler  
Project Coordinator

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

### ANALYTICAL RESULTS

Workorder: 2229978 17-013 Washington Twp BOE

Lab ID: **2229978003** Date Collected: 5/5/2017 06:58 Matrix: Drinking Water  
 Sample ID: **050517-03** Date Received: 5/12/2017 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>METALS</b>										
Copper, Total	0.18		mg/L	0.0050	EPA 200.8	5/19/17 09:42	MO	5/19/17 10:51	MO	A1
Lead, Total	0.050		mg/L	0.0020	EPA 200.8	5/19/17 09:42	MO	5/19/17 10:51	MO	A1

*Shannon Butler*  
 Ms. Shannon Butler  
 Project Coordinator

### ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
 Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

### ANALYTICAL RESULTS

Workorder: 2229978 17-013 Washington Twp BOE

Lab ID: 2229978004 Date Collected: 5/5/2017 07:01 Matrix: Drinking Water  
Sample ID: 050517-04 Date Received: 5/12/2017 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>METALS</b>										
Copper, Total	0.069		mg/L	0.0050	EPA 200.8	5/19/17 09:42	MO	5/19/17 11:07	MO	A1
Lead, Total	0.0052		mg/L	0.0020	EPA 200.8	5/19/17 09:42	MO	5/19/17 11:07	MO	A1

Ms. Shannon Butler  
Project Coordinator

### ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
 State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

**QUALITY CONTROL DATA**

Workorder: 2229978 17-013 Washington Twp BOE

QC Batch: MDIG/64868 Analysis Method: EPA 200.8  
 QC Batch Method: EPA ACIDT  
 Associated Lab Samples: 2229978001

**METHOD BLANK: 2540480**

Parameter	Blank Result	Units	Reporting Limit
Copper, Total	ND	mg/L	0.0050
Lead, Total	ND	mg/L	0.0020

**LABORATORY CONTROL SAMPLE: 2540481**

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Copper, Total	105	mg/L	.1	0.10	85 - 115
Lead, Total	98.6	mg/L	.005	0.0049	85 - 115

**MATRIX SPIKE: 2540482 DUPLICATE: 2540483 ORIGINAL: 2229954001**

\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Lead, Total	.00289	mg/L	.1	.10532	.10664	102	104	70 - 130	1.25	20

**MATRIX SPIKE: 2540484 DUPLICATE: 2540485 ORIGINAL: 2229965001**

\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Lead, Total	.00066	mg/L	.1	.10094	.10183	100	101	70 - 130	.88	20

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
 Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey





34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
 State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

**QUALITY CONTROL DATA**

Workorder: 2229978 17-013 Washington Twp BOE

QC Batch: MDIG/64869 Analysis Method: EPA 200.8  
 QC Batch Method: EPA ACIDT  
 Associated Lab Samples: 2229978002, 2229978003, 2229978004

METHOD BLANK: 2540507

Parameter	Blank Result	Units	Reporting Limit
Copper, Total	ND	mg/L	0.0050
Lead, Total	ND	mg/L	0.0020

LABORATORY CONTROL SAMPLE: 2540508

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Copper, Total	104	mg/L	.1	0.10	85 - 115
Lead, Total	95.7	mg/L	.005	0.0048	85 - 115

MATRIX SPIKE: 2540509 DUPLICATE: 2540510 ORIGINAL: 2229978002

\*\*\*NOTE: The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Copper, Total	.06217	mg/L	.1	.15793	.16503	95.8	103	70 - 130	4.4	20
Lead, Total	.0019	mg/L	.1	.10112	.10234	99.2	100	70 - 130	1.2	20

MATRIX SPIKE: 2540511 DUPLICATE: 2540512 ORIGINAL: 2229981004

\*\*\*NOTE: The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Copper, Total	.18528	mg/L	.1	.28475	.28196	99.5	96.7	70 - 130	.98	20
Lead, Total	.00838	mg/L	.1	.11426	.11043	106	102	70 - 130	3.41	20

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
 Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 2229978 17-013 Washington Twp BOE

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2229978001	050517-01	EPAACIDT	MDIG/64868	EPA 200.8	META/57386
2229978002	050517-02	EPAACIDT	MDIG/64869	EPA 200.8	META/57386
2229978003	050517-03	EPAACIDT	MDIG/64869	EPA 200.8	META/57386
2229978004	050517-04	EPAACIDT	MDIG/64869	EPA 200.8	META/57386

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
 Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-3541  
F. 717-944-1430

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
**ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.**

Generated by ALS



Client Name: RK Occupational & Environmental Analysis  
Address: 401 St. James Avenue  
Phillipsburg, NJ 08865  
Contact: PD McGuinness  
Phone#: 908-454-6316  
Project Name#: 17-013 Washington Twp Bd of Educ  
Bill To: Same

Container Type: PL  
Container Size: 250 ml  
Preservative: HNO<sub>3</sub>

COOLING/STORAGE (Completed by Receiving Lab)  
Cooler Temp: 12  
Therm ID: 318  
No. of Coolers: Y N Initial: JG  
Custody Seals Present? (if present) Seals Intact? Received on leaf? COC Labels Complete/Accurate? Cont. in Good Cond? Correct Containers? Correct Sample Volumes? Correct Preservation? Headspace/Volatiles?

Count/Tracking #: Sample/COC Comments

Sample ID	Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Enter Number of Containers Per Sample or Field Results Below.
050517-01		05-05-17	06:40	1
050517-02		05-05-17	06:44	1
050517-03		05-05-17	06:58	1
050517-04		05-05-17	07:01	1

Relinquished By/ Company Name	Date	Time	Received By/ Company Name	Date	Time
1 [Signature]	5/12/17	10:00	D. [Signature]	5/12/17	14:06
3 D. [Signature]	5/12/17		[Signature]	5/12/17	17:30
5 [Signature]	5/12/17	15:06	[Signature]	5/12/17	19:56
7					
9					

Project Comments: Re-Test in Kitchens  
 LOGGED BY (Signature): [Signature] 5/12/17  
 REVIEWED BY (Signature): [Signature]  
 Data Deliverables:  Standard  CLP-Rite  USACE  MS Excel File  
 Reportable to PADEP? Yes  No   
 PWSID #: 10  
 EDDS: Format Type: MS Excel File  
 ALS Field Services:  Pickup  Labor  Composite Sampling  Rental Equipment  Other:  
 Special Processing: USACE  Navy   
 State Samples Collected In: NY  NJ  PA  NC  MD  WV   
 Sample Disposal: Lab  Special

ALS