



April 11, 2017

ATC Group Services
Attn: Mr. Robert Smith
46555 Humboldt, Suite 100
Novi, MI 48377

Project: School Drinking Water Testing

Dear Mr. Robert Smith,

Enclosed is a copy of the laboratory report for the following work order(s) received by Pace Analytical:

Work Order	Received	Description
1703455	03/28/2017	Moses Field

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ANAB DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/13-049-0); Georgia EPD (#026-999-161/1023062); Illinois DEP (#200026/003329); Kentucky DEP (AL123065/#0021); Michigan DPH (#0034); Minnesota DPH (#026-999-161/1023062); New York ELAP (#11776/53116); North Carolina DNRE (#659); Virginia DCLS (#460153/7952); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-14-00305).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications and Project Technical Narrative sections of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Gary L. Wood", written over a light blue rectangular background.

Gary L. Wood
Client Services Manager



PROJECT TECHNICAL NARRATIVE(s)

No Project Narrative is associated with this report.



STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-P-MF Hall @ 21 (R)**
Lab Sample ID: **1703455-01**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 06:55
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.096	0.0010	1.3	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 13:40	KLV	1702816
Lead	0.016	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 13:40	KLV	1702816



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-F-MF Hall @ 21 (R)**
Lab Sample ID: **1703455-02**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 06:56
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.083	0.0010	1.3	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 13:43	KLV	1702816
Lead	0.0036	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 13:43	KLV	1702816



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-P-MF Hall @ 21 (L)**
Lab Sample ID: **1703455-03**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 06:59
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.14	0.0050	1.3	mg/L	5	USEPA-200.8 Rev. 5.4	04/07/17 10:07	KLV	1702816
Lead	0.028	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 14:01	KLV	1702816



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-F-MF Hall @ 21 (L)**
Lab Sample ID: **1703455-04**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 07:00
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.069	0.0010	1.3	mg/L	1	USEPA-200.8 Rev. 5.4	04/07/17 10:09	KLV	1702816
Lead	0.0052	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 14:03	KLV	1702816



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-P-MF Hall @ 7 (R)**
Lab Sample ID: **1703455-05**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 07:02
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.070	0.0010	1.3	mg/L	1	USEPA-200.8 Rev. 5.4	04/07/17 10:12	KLV	1702816
Lead	0.0088	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 14:06	KLV	1702816



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-F-MF Hall @ 7 (R)**
Lab Sample ID: **1703455-06**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 07:03
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.030	0.0010	1.3	mg/L	1	USEPA-200.8 Rev. 5.4	04/07/17 10:14	KLV	1702816
Lead	0.0014	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 14:08	KLV	1702816



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-P-MF Hall @ 7 (L)**
Lab Sample ID: **1703455-07**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 07:04
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.057	0.0010	1.3	mg/L	1	USEPA-200.8 Rev. 5.4	04/07/17 10:17	KLV	1702816
Lead	0.0053	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 14:11	KLV	1702816



ANALYTICAL REPORT

Client: **ATC Group Services**
Project: School Drinking Water Testing
Client Sample ID: **DWF-F-MF Hall @ 7 (L)**
Lab Sample ID: **1703455-08**
Matrix: Drinking Water

Work Order: **1703455**
Description: Moses Field
Sampled: 03/28/17 07:05
Sampled By: ATC
Received: 03/28/17 18:45

Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Copper	0.026	0.0010	1.3	mg/L	1	USEPA-200.8 Rev. 5.4	04/07/17 10:19	KLV	1702816
Lead	<0.0010	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	04/06/17 14:13	KLV	1702816

QUALITY CONTROL REPORT

Metals in Drinking Water by EPA 200 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
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Analyte: Copper/USEPA-200.8 Rev. 5.4

QC Batch: 1702816 (Metals Direct Analysis) Analyzed: 04/06/2017 By: KLV

Method Blank			<0.0010	mg/L					0.0010
Laboratory Control Sample		0.0400	0.0395	mg/L	99	85-115			0.0010

Analyte: Lead/USEPA-200.8 Rev. 5.4

QC Batch: 1702816 (Metals Direct Analysis) Analyzed: 04/06/2017 By: KLV

Method Blank			<0.0010	mg/L					0.0010
Laboratory Control Sample		0.0400	0.0391	mg/L	98	85-115			0.0010



PRETREATMENT SUMMARY PAGE

Client: **ATC Group Services**
Project: **School Drinking Water Testing**

Pretreatment	Lab Sample ID	Batch	By	Date & Time Prepared
USEPA 600/R-94/173	1703455-01	1702816	JBA	03/30/17 16:53
	1703455-02	1702816	JBA	03/30/17 16:53
	1703455-03	1702816	JBA	03/30/17 16:53
	1703455-04	1702816	JBA	03/30/17 16:53
	1703455-05	1702816	JBA	03/30/17 16:53
	1703455-06	1702816	JBA	03/30/17 16:53
	1703455-07	1702816	JBA	03/30/17 16:53
	1703455-08	1702816	JBA	03/30/17 16:53



5560 Corporate Exchange Court SE
Grand Rapids, MI 49512

Phone (616) 975-4500 Fax (616) 942-7463

www.trimatrixlabs.com

Chain of Custody Record

COC No.

156841

For Lab Use Only

Cart None

VOA Rack/Tray

Receipt Log No.

Project Chemical

Work Order No.

Matrix Code

Sample Number

Field Sample ID

Cooler ID

Sample Date

Sample Time

Container Type

Number of Containers Submitted

Tons

Sample Comments

Preservatives

None pH-7

HNO₃ pH<2

H₂SO₄ pH<2

1+1 HCl pH<2

NaOH pH>12

ZnAc/NaOH pH>9

Analyses Requested

Pg. 1 of 1

PRESERVATIVES

A NONE pH-7

B HNO₃ pH<2

C H₂SO₄ pH<2

D 1+1 HCl pH<2

E NaOH pH>12

F ZnAc/NaOH pH>9

G MeOH

H Other (note below)

8 B	LEAD
8 B	COPPER

Container Type (corresponds to Container Packing List)

Number of Containers Submitted

Tons

Sample Comments

3/28/17 6:55 X DW X X

6:54 6:54 6:54 6:54

6:59 6:59 6:59 6:59

7:00 7:00 7:00 7:00

7:02 7:02 7:02 7:02

7:03 7:03 7:03 7:03

7:04 7:04 7:04 7:04

7:05 7:05 7:05 7:05

@RECEIVING

Sampled By (print)

Kimberly JOHNSON

How Shipped?

Hand

Carrier

Tracking No.

Comments

1. Received By

Date

Time

2. Requisitioned By

Date

Time

3. Received For Use By

Date

Time

Kimberly JOHNSON

ATC GROUP SERVICES

Kimberly JOHNSON 3/28/17

3-28-17 1845

217 ARDIN 3-28-17 18

WHITE COPY - REPORT

YELLOW COPY - LABORATORY

PINK COPY - FIELD



SAMPLE RECEIVING / LOG-IN CHECKLIST

Client <u>QTC</u>	Work Order # <u>1703455</u>
Receipt Record Page/Line # <u>49-11</u>	New / Add To <input checked="" type="checkbox"/> Project Chemist <input type="checkbox"/> Sample #s

Recorded by (initials/date) <u>DN 3-28-17</u>	<input checked="" type="checkbox"/> Cooler <input type="checkbox"/> Box <input type="checkbox"/> Other	Qty Received <u>1</u>	<input checked="" type="checkbox"/> IR Gun (#202) <input type="checkbox"/> Digital Thermometer (#54) <input type="checkbox"/> Other (# <u> </u>)	<input type="checkbox"/> See Additional Cooler Information Form
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Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time	
<u>17E35031910</u>								
Custody Seals: <input checked="" type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		
Coolant Type: <input checked="" type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None		Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None		Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None		Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None		
Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		
Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		
If Present, Temperature Blank Location is: <input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		If Present, Temperature Blank Location is: <input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		If Present, Temperature Blank Location is: <input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		If Present, Temperature Blank Location is: <input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		
Observed °C	Correction Factor °C	Actual °C	Observed °C	Correction Factor °C	Actual °C	Observed °C	Correction Factor °C	
Temp Blank:			Temp Blank:			Temp Blank:		
Sample 1:	<u>3.4</u>	<u>0</u>	<u>3.4</u>	Sample 1:		Sample 1:		
Sample 2:	<u>4.3</u>	<u>0</u>	<u>4.3</u>	Sample 2:		Sample 2:		
Sample 3:	<u>5.8</u>	<u>0</u>	<u>5.8</u>	Sample 3:		Sample 3:		
3 Sample Average °C: <u>4.5</u>			3 Sample Average °C:			3 Sample Average °C:		
<input type="checkbox"/> Cooler ID on COC?			<input type="checkbox"/> Cooler ID on COC?			<input type="checkbox"/> Cooler ID on COC?		
<input type="checkbox"/> VOC Trip Blank received?			<input type="checkbox"/> VOC Trip Blank received?			<input type="checkbox"/> VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Chain of Custody record(s)? If No, Initiated By _____ <input checked="" type="checkbox"/> Received for Lab Signed/Date/Time? <input type="checkbox"/> Shipping document? <input type="checkbox"/> Other _____ COC Information <input checked="" type="checkbox"/> Pace COC <input type="checkbox"/> Other _____ COC ID Numbers: <u>156841</u>	Check Sample Preservation N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Temperature Blank OR average sample temperature, ≥6° C? <input type="checkbox"/> If either is ≥6° C, was thermal preservation required? If "Yes", Project Chemist Approval Initials: _____ If "Yes" Completed Non Con Cooler - Cont Inventory Form? Completed Sample Preservation Verification Form? <input checked="" type="checkbox"/> Samples chemically preserved correctly? If "No", added orange tag? <input checked="" type="checkbox"/> Received pre-preserved VOC soils? <input type="checkbox"/> MeOH <input type="checkbox"/> Na ₂ SO ₄
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Check COC for Accuracy Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/> Analysis Requested? <input checked="" type="checkbox"/> Sample ID matches COC? <input checked="" type="checkbox"/> Sample Date and Time matches COC? Container type completed on COC? <input type="checkbox"/> All container types indicated are received?	Check for Short Hold-Time Prep/Analyses <input type="checkbox"/> Bacteriological <input type="checkbox"/> Air Bags <input type="checkbox"/> EnCores / Methanol Pre-Preserved <input type="checkbox"/> Formaldehyde/Aldehyde <input type="checkbox"/> Green-tagged containers <input type="checkbox"/> Yellow/White-tagged 1 L ambers (SV Prep-Lab)
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Sample Condition Summary N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Broken containers/lids? <input checked="" type="checkbox"/> Missing or incomplete labels? <input checked="" type="checkbox"/> Illegible information on labels? <input checked="" type="checkbox"/> Low volume received? <input checked="" type="checkbox"/> Inappropriate or non-Pace containers received? <input type="checkbox"/> VOC vials / TOX containers have headspace? <input type="checkbox"/> Extra sample locations / containers not listed on COC?	Notes <input type="checkbox"/> Trip Blank received <input type="checkbox"/> Trip Blank not listed on COC Cooler Received (Date/Time) <u>DN 3-28-17</u> Paperwork Delivered (Date/Time) <u>3-28-17</u> ≤1 Hour Goal Met? <u>Yes / No</u>
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SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client: <u>OTC</u>	Work Order #: <u>1703455</u>
Receipt Log #: <u>49-11</u>	Project Chemist: _____
Completed By (initials/date): <u>SN 3-28-17</u>	

COC ID #: <u>156841</u>				Adjusted by: _____ Date: _____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	6	15						
Tag Color	Lt. Blue	Blue	Brown	Red	Red Stripe						
Preservative	NaOH	H ₂ SO ₄	H ₂ SO ₄	HNO ₃	HNO ₃						
Expected pH	>12	<2	<2	<2	<2						
COC Line #1				✓							
COC Line #2				✓							
COC Line #3				✓							
COC Line #4				✓							
COC Line #5				✓							
COC Line #6				✓							
COC Line #7				✓							
COC Line #8				✓							
COC Line #9											
COC Line #10											

pH Strip Reagent # / Lot #	
<input checked="" type="checkbox"/>	7021862 / HC693124
<input type="checkbox"/>	Other _____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 6 and 15.

COC ID # _____				Adjusted by: _____ Date: _____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	6	15						
Tag Color	Lt. Blue	Blue	Brown	Red	Red Stripe						
Preservative	NaOH	H ₂ SO ₄	H ₂ SO ₄	HNO ₃	HNO ₃						
Expected pH	>12	<2	<2	<2	<2						
COC Line #1											
COC Line #2											
COC Line #3											
COC Line #4											
COC Line #5											
COC Line #6											
COC Line #7											
COC Line #8											
COC Line #9											
COC Line #10											

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5 NaOH	
500	2.5
1000	5.0
Container Type 4 H ₂ SO ₄	
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13 H ₂ SO ₄	
500	2.5

Comments
