ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

46555 Humboldt Drive
Novi, Michigan 48377
Telephone 248-669-5140
www.atcgroupservices.com

August 31, 2018

Mathew Sam
Detroit Public Schools
1601 Farnsworth
Detroit, Michigan 48202

SUBMITTED VIA EMAIL TO: mathew.sam@detroitk12.org

SUBJECT: **Drinking Water Screening Report**
Randolph Career Academy
17101 Hubbell
Detroit, Michigan

Dear Mr. Sam:

ATC Group Services, LLC (ATC) is pleased to submit this Drinking Water Screening Report for the subject school. The drinking water samples collected from the school were submitted to Pace Analytical Services, LLC, for Michigan Department of Environmental Quality (MDEQ) Drinking Water Certified lead and copper analysis.

SCOPE OF WORK

At the request of the Detroit Public Schools (DPS), ATC collected drinking water samples as a general screening for copper and lead at the subject school. The water sampling conducted included the sampling of fixtures within teacher's lounges, kitchens, water fountains and pre-k classrooms. One (1) sample was collected at each outlet: a first draw (Primary) sample. The Primary samples were collected from outlets that had been inactive for a minimum of eight to eighteen hours. The fixture inventory locations including the sample locations are shown on the Fixture Inventory Locations Map included under Attachment A and fixture inventory photos including the sample location photos are included in a Fixture Inventory Photo Log under Attachment B.

The drinking water samples were collected in 125 milliliter, wide-mouth sample containers, containing nitric acid (preservative). Each sample container was labeled utilizing a unique coding system that identified: the type of drinking outlet sampled as well as the location.

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The samples were transported under chain of custody to Pace Analytical Services, LLC, located at 5560 Corporate Exchange Ct. SE Grand Rapids, MI for MDEQ drinking water certified lead and copper analysis, using analytical method EPA 200.8 rev 5.4.

FINDINGS

Analytical results indicate that 2 of the samples analyzed were above the EPA recommended limits of 15 micrograms per liter (ug/L) for lead. One of the samples analyzed was above the EPA recommended limits of 1300 micrograms per liter (ug/L) for copper. The table below summarizes the analytical results for the samples submitted. The laboratory analytical reports and chain of custody are provided in Attachment C.

Table 1 – Water Testing Results (July 31, 2018)

Sample Number	Location	Description	Total Lead (ug/l)	Total Copper (ug/l)
1-HW-DWF-1	located in 1st floor, on the right of main entrance	Drinking water fountain	2.5 ug/L	234 ug/L
1-HW-DWF-2	located in 1st floor, on the left of main entrance	Drinking water fountain	**18.6 ug/L**	1290 ug/L
2-HW-DWF-3	located in 2nd floor, next to storage room	Drinking water fountain	2.8 ug/L	630 ug/L
2-SR-SRF-4	located in 2nd floor, next to #3	Staff Faucet	1.1 ug/L	113 ug/L
2-HW-B-5	located in 2nd floor, next to stairs across from boys restrooms (left)	Bubbler	5.7 ug/L	497 ug/L
1-HW-DWF-7	located in 1st floor, by door #5 (left)	Drinking water fountain	1.5 ug/L	626 ug/L
1-HW-DWF-8	located in 1st floor, by door #5 (right)	Drinking water fountain	1.7 ug/L	996 ug/L
1-HW-DWF-9	located in 1st floor, next to room 127 (left)	Drinking water fountain	1.8 ug/L	475 ug/L

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Sample Number	Location	Description	Total Lead (ug/l)	Total Copper (ug/l)
1-HW-DWF-10	located in 1st floor, next to room 127 (right)	Drinking water fountain	1.3 ug/L	**2060 ug/L**
1-102.1-SRF-12	located in 1st floor across from electrical room	Staff Faucet	**20.3 ug/L**	902 ug/L

Key: NA - Not Analyzed

ug/L- micrograms per liter /parts per billion (ppb)

Analysis of samples a drinking water fountain, located in 1st floor, on the left of main entrance and the staff faucet, located in 1st floor across from electrical room indicate that lead levels were above the MCL. The drinking water fountain, located in 1st floor next to room 127 samples indicate that copper levels were above the MCL. See recommendations below.

RECOMMENDATIONS

For drinking water fixtures that exceed the MCL after the initial sampling, ATC recommends the following:

1. Implement a plan in accordance with MDEQ Guidance on Drinking Water Sampling for Lead and Copper, April, 2016 Version2; OR
2. Remove fixture from service.
3. Implement a flush plan for fixtures that exceed the MCL of the initial sample according to MDEQ Guidance and the EPA's 3T's for Reducing Lead in Drinking Water in Schools.

LIMITATIONS

The sampling and analysis completed was: a preliminary screening for lead and copper only, to assess lead and copper concentrations (ug/L) at drinking water outlets in the school designated as high use by DPS, and may not be representative of all drinking water outlets within the school. If lead or copper concentrations were identified above their respective MCL's at any of the drinking water outlets tested, further review of the plumping system, fixtures affected, and testing may be completed to assess the source of the elevated levels of lead and/or copper, as well as, any other response actions deemed necessary by DPS.

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Future drinking water evaluation and sampling in accordance with the recommendations may be predicated on applicable guidelines by the MDEQ or EPA and will be determined prior to developing a sampling plan for the school.

Sincerely,

ATC Group Services, LLC

Martin K. Gamble
Senior Project Manager

Robert C. Smith
Building Science Department Manager

Attachments

Attachment A: Fixture Inventory Locations Map/Form
Attachment B: Fixture Inventory Photo Log
Attachment C: Laboratory Analytical Report

School Name: Randolph Career Academy-Construction Trades

Address 17101 Hubbell, Detroit, MI

Fixture Identification	Fixture Location	Fixture Description	Photo #
1-HW-DWF-1	located in 1st floor, on the right of main entrance	Drinking water fountain	1
1-HW-DWF-2	located in 1st floor, on the left of main entrance	Drinking water fountain	2
2-HW-DWF-3	located in 2nd floor, next to storage room	Drinking water fountain	3
2-SR-SRF-4	located in 2nd floor, next to #3	Staff Faucet	4
2-HW-B-5	located in 2nd floor, next to stairs across from boys restrooms (left)	Bubbler	5
2-HW-B-6	located in 2nd floor, next to stairs across from boys restrooms (right)	Bubbler	6
1-HW-DWF-7	located in 1st floor, by door #5 (left)	Drinking water fountain	7
1-HW-DWF-8	located in 1st floor, by door #5 (right)	Drinking water fountain	8
1-HW-DWF-9	located in 1st floor, next to room 127 (left)	Drinking water fountain	9
1-HW-DWF-10	located in 1st floor, next to room 127 (right)	Drinking water fountain	10
1-NS-NSF-11	located in 1st floor general office (clinic)	Nurse faucet	11
1-102.1-SRF-12	located in 1st floor across from electrical room	Staff Faucet	12

FIXTURE INVENTORY PHOTOLOG
Randolph Career Academy-Construction Trades
17101 Hubbell, Detroit, Michigan

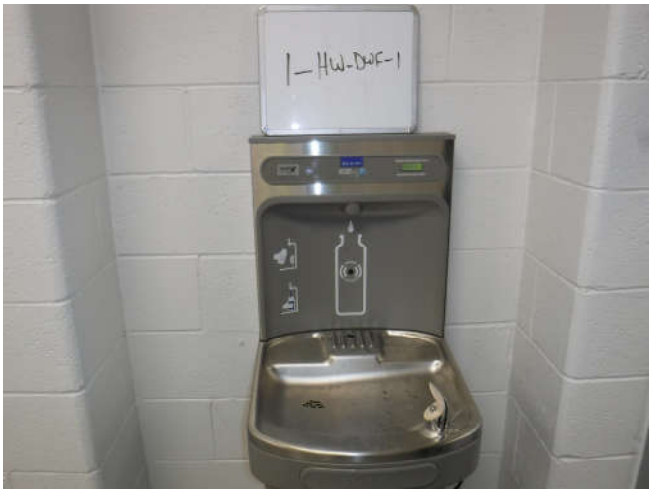

Photo 1: Drinking water fountain, located in 1st floor, on the right of main entrance

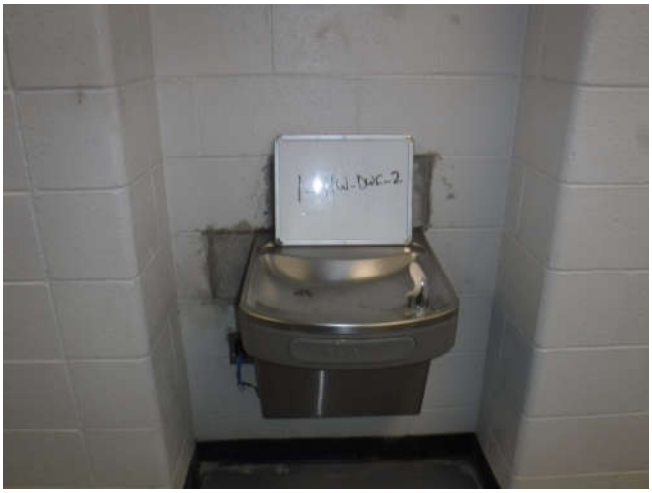

Photo 2: Drinking water fountain, located in 1st floor, on the left of main entrance

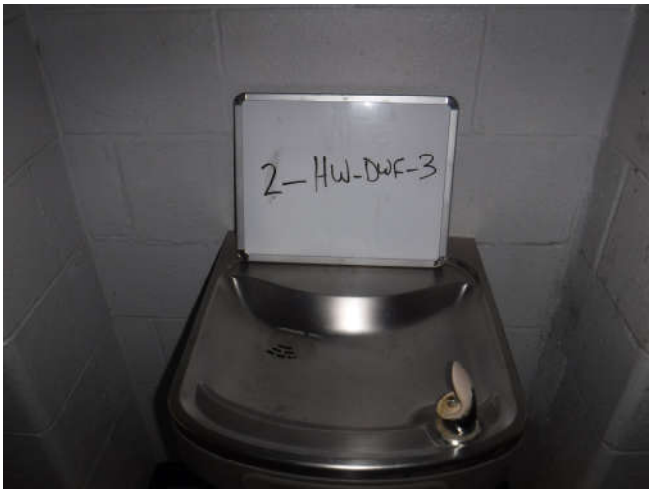

Photo 3: Drinking water fountain, located in 2nd floor, next to storage room

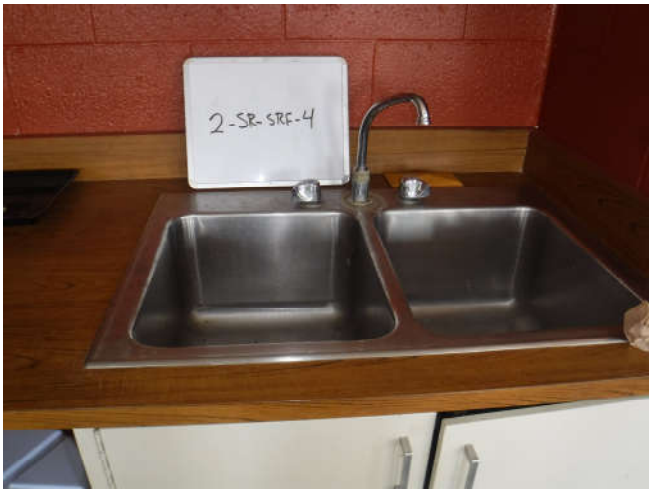

Photo 4: Staff faucet, located in 2nd fl. Next to #3

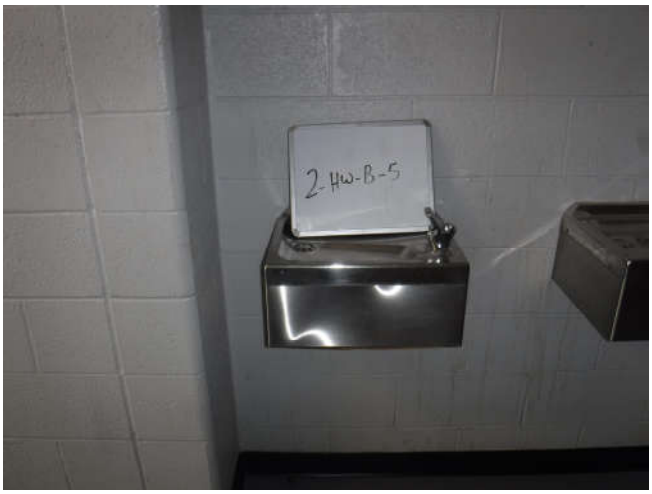

Photo 5: Bubbler, located in 2nd floor, next to stairs across from boys restrooms (left)

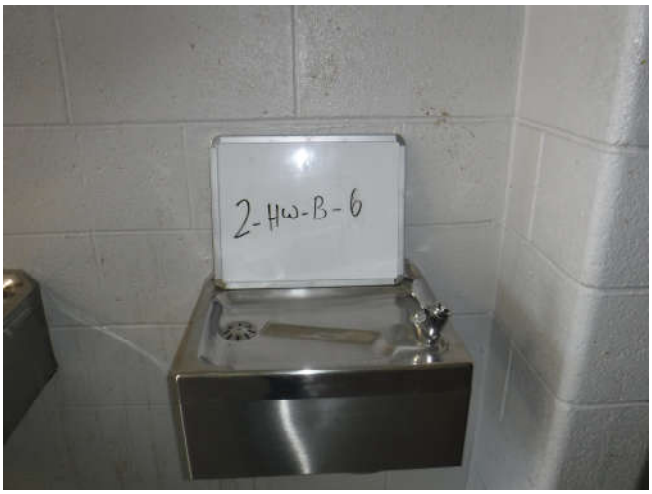

Photo 6: Bubbler, located in 2nd floor, next to stairs across from boys restrooms (right)

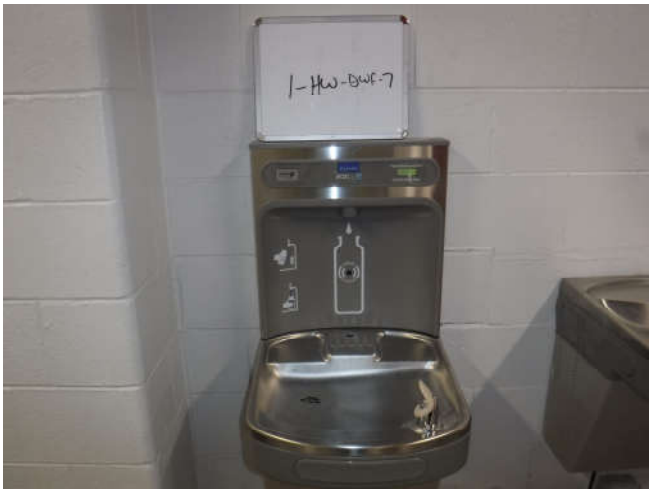

Photo 7: Bubbler, located in 1st floor, by door #5 (left)

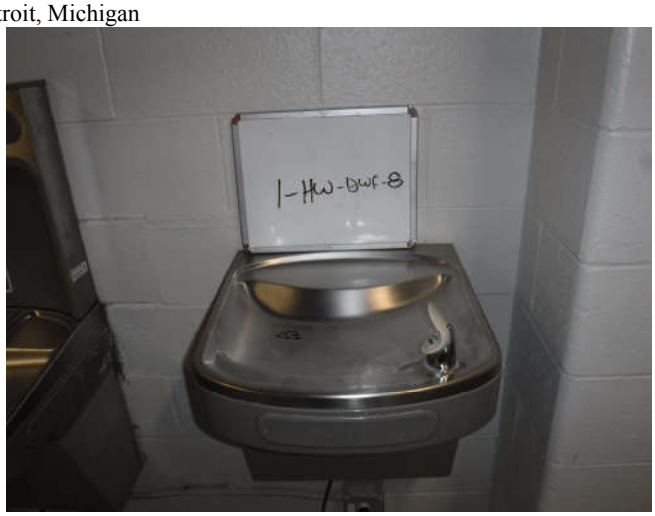

Photo 8: Bubbler, located in 1st floor, by door #5 (right)

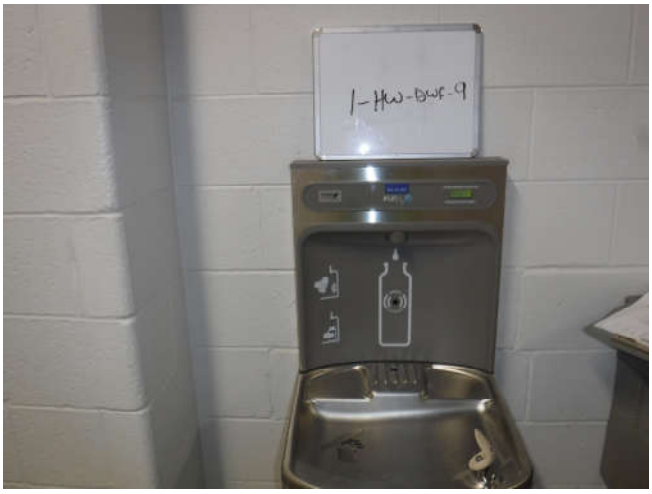

Photo 9: Drinking water fountain, located in 1st floor, next to room 127 (left)

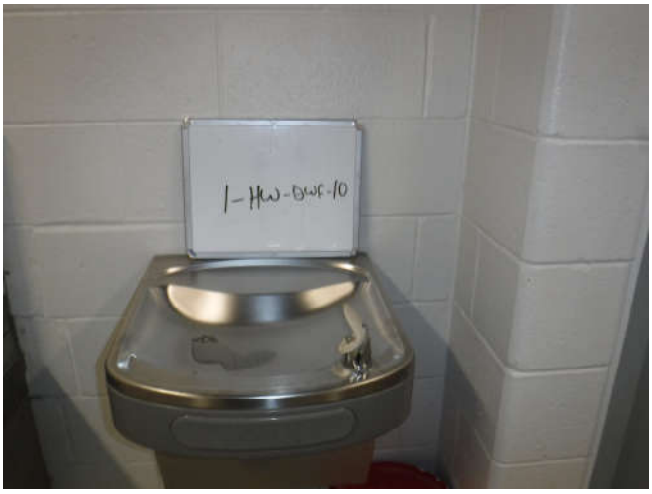

Photo 10: Drinking water fountain, located in 1st floor, next to room 127 (right)

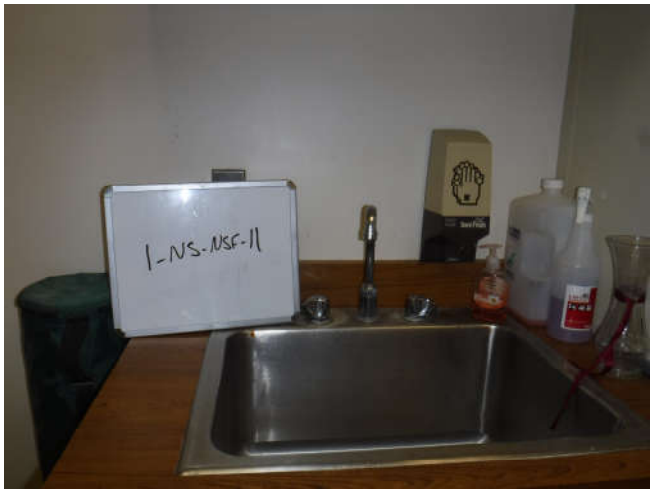

Photo 11:Nurse faucet, located in 1st floor in general office (clinic)

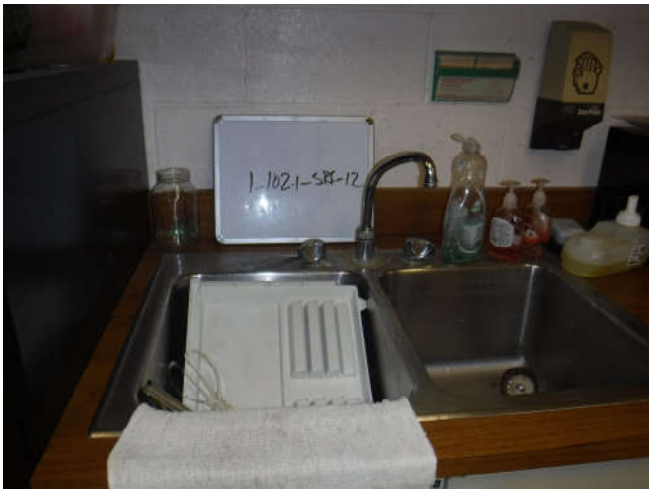

Photo 12:Staff faucet, located in 1st floor, across from electrical room

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
Grand Rapids, MI 49512
(616)975-4500

July 31, 2018

Robert Smith
ATC Group Services
46555 Humboldt
Suite 100
Novi, MI 48377

RE: Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Dear Robert Smith:
Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Will Cole
will.cole@pacelabs.com
(616)975-4500
Project Manager

Enclosures

cc: AP c/o Abigail Jardine, ATC Group Services
Michael Hauswirth, ATC Group Services

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
Grand Rapids, MI 49512
(616)975-4500

CERTIFICATIONS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Grand Rapids Certification ID's

5560 Corporate Exchange Ct SE, Grand Rapids, MI 49512
Minnesota Department of Health, Certificate #1385941
Arkansas Department of Environmental Quality, Certificate #18-046-0
Georgia Environmental Protection Division, Stipulation
Illinois Environmental Protection Agency, Certificate #004325
Michigan Department of Environmental Quality, Laboratory #0034
New York State Department of Health, Serial #57971 and 57972
North Carolina Division of Water Resources, Certificate #659
Virginia Department of General Services, Certificate #9780
Wisconsin Department of Natural Resources, Laboratory #999472650
U.S. Department of Agriculture Permit to Receive Soil, Permit #P330-17-00278

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Grand Rapids, MI 49512
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SAMPLE SUMMARY

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4615401001	**1-HW-DWF-1**	Drinking Water	07/25/18 10:27	07/25/18 19:20
4615401002	**1-HW-DWF-2**	Drinking Water	07/25/18 10:29	07/25/18 19:20
4615401003	**2-HW-DWF-3**	Drinking Water	07/25/18 10:30	07/25/18 19:20
4615401004	**2-SR-SRF-4**	Drinking Water	07/25/18 10:49	07/25/18 19:20
4615401005	**2-HW-B-5**	Drinking Water	07/25/18 10:37	07/25/18 19:20
4615401006	**1-HW-DWF-7**	Drinking Water	07/25/18 10:54	07/25/18 19:20
4615401007	**1-HW-DWF-8**	Drinking Water	07/25/18 10:55	07/25/18 19:20
4615401008	**1-HW-DWF-9**	Drinking Water	07/25/18 10:59	07/25/18 19:20
4615401009	**1-HW-DWF-10**	Drinking Water	07/25/18 11:00	07/25/18 19:20
4615401010	**1-102.1-SRF-12**	Drinking Water	07/25/18 10:25	07/25/18 19:20

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Grand Rapids, MI 49512
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SAMPLE ANALYTE COUNT

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4615401001	**1-HW-DWF-1**	EPA 200.8	DWJ	2
4615401002	**1-HW-DWF-2**	EPA 200.8	DWJ	2
4615401003	**2-HW-DWF-3**	EPA 200.8	DWJ	2
4615401004	**2-SR-SRF-4**	EPA 200.8	DWJ	2
4615401005	**2-HW-B-5**	EPA 200.8	DWJ	2
4615401006	**1-HW-DWF-7**	EPA 200.8	DWJ	2
4615401007	**1-HW-DWF-8**	EPA 200.8	DWJ	2
4615401008	**1-HW-DWF-9**	EPA 200.8	DWJ	2
4615401009	**1-HW-DWF-10**	EPA 200.8	DWJ	2
4615401010	**1-102.1-SRF-12**	EPA 200.8	DWJ	2

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 1-HW-DWF-1 **Lab ID: 4615401001** Collected: 07/25/18 10:27 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**234**	ug/L	5.0	1300	5		07/30/18 11:28	7440-50-8	
Lead	**2.5**	ug/L	1.0	15	1		07/27/18 14:49	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 1-HW-DWF-2 **Lab ID: 4615401002** Collected: 07/25/18 10:29 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**1290**	ug/L	25.0	1300	25		07/30/18 11:33	7440-50-8	
Lead	**18.6**	ug/L	1.0	15	1		07/27/18 14:54	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 2-HW-DWF-3 **Lab ID: 4615401003** Collected: 07/25/18 10:30 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**630**	ug/L	10.0	1300	10		07/30/18 11:35	7440-50-8	
Lead	**2.8**	ug/L	1.0	15	1		07/27/18 14:56	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 2-SR-SRF-4 **Lab ID: 4615401004** Collected: 07/25/18 10:49 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**113**	ug/L	5.0	1300	5		07/30/18 11:36	7440-50-8	
Lead	**1.1**	ug/L	1.0	15	1		07/27/18 14:57	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 2-HW-B-5 **Lab ID: 4615401005** Collected: 07/25/18 10:37 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**497**	ug/L	10.0	1300	10		07/30/18 11:40	7440-50-8	
Lead	**5.7**	ug/L	1.0	15	1		07/27/18 14:59	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 1-HW-DWF-7 **Lab ID: 4615401006** Collected: 07/25/18 10:54 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**626**	ug/L	10.0	1300	10		07/30/18 11:41	7440-50-8	
Lead	**1.5**	ug/L	1.0	15	1		07/27/18 15:00	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 1-HW-DWF-8 **Lab ID: 4615401007** Collected: 07/25/18 10:55 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**996**	ug/L	25.0	1300	25		07/30/18 11:43	7440-50-8	
Lead	**1.7**	ug/L	1.0	15	1		07/27/18 15:02	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 1-HW-DWF-9 **Lab ID: 4615401008** Collected: 07/25/18 10:59 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**475**	ug/L	10.0	1300	10		07/30/18 11:44	7440-50-8	
Lead	**1.8**	ug/L	1.0	15	1		07/27/18 15:16	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 1-HW-DWF-10 **Lab ID: 4615401009** Collected: 07/25/18 11:00 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**2060**	ug/L	50.0	1300	50		07/30/18 11:45	7440-50-8	
Lead	**1.3**	ug/L	1.0	15	1		07/27/18 15:18	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Sample: 1-102.1-SRF-12 **Lab ID: 4615401010** Collected: 07/25/18 10:25 Received: 07/25/18 19:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8								
Copper	**902**	ug/L	25.0	1300	25		07/30/18 11:47	7440-50-8	
Lead	**20.3**	ug/L	1.0	15	1		07/27/18 15:19	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
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(616)975-4500

QUALITY CONTROL DATA

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

QC Batch: 29183 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: ICPMS Metals, No Prep
Associated Lab Samples: 4615401001, 4615401002, 4615401003, 4615401004, 4615401005, 4615401006, 4615401007, 4615401008, 4615401009, 4615401010

METHOD BLANK: 116618 Matrix: Water
Associated Lab Samples: 4615401001, 4615401002, 4615401003, 4615401004, 4615401005, 4615401006, 4615401007, 4615401008, 4615401009, 4615401010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	<1.0	1.0	07/27/18 15:12	
Lead	ug/L	<1.0	1.0	07/27/18 15:12	

LABORATORY CONTROL SAMPLE: 116619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	20	21.4	107	85-115	
Lead	ug/L	20	20.8	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 116620 116621

Parameter	Units	4615401001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	234	100	100	322	324	88	90	70-130	1	20	
Lead	ug/L	2.5	20	20	23.7	24.0	106	108	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 116622 116623

Parameter	Units	4615402010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	224	100	100	312	321	87	97	70-130	3	20	
Lead	ug/L	80.6	20	20	105	106	120	128	70-130	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
Grand Rapids, MI 49512
(616)975-4500

QUALIFIERS

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, LLC
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Grand Rapids, MI 49512
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DW-Randolph Career Academy
Pace Project No.: 4615401

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4615401001	**1-HW-DWF-1**	EPA 200.8	29183		
4615401002	**1-HW-DWF-2**	EPA 200.8	29183		
4615401003	**2-HW-DWF-3**	EPA 200.8	29183		
4615401004	**2-SR-SRF-4**	EPA 200.8	29183		
4615401005	**2-HW-B-5**	EPA 200.8	29183		
4615401006	**1-HW-DWF-7**	EPA 200.8	29183		
4615401007	**1-HW-DWF-8**	EPA 200.8	29183		
4615401008	**1-HW-DWF-9**	EPA 200.8	29183		
4615401009	**1-HW-DWF-10**	EPA 200.8	29183		
4615401010	**1-102.1-SRF-12**	EPA 200.8	29183		

Pace Analytical

WO# : 4615401

4615401

#19621

HAIN-OF-CUSTODY / Analytical Request Document

e Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	ATC Group Services LLC
Address:	46555 Humboldt Drive, Suite 100
	Novi, MI 48377
Email:	robert.smith@atcgs.com
Phone:	248-669-5140 Fax: 248-669-5147
Requested Due Date:	

Report To:	Robert Smith
Copy To:	
Purchase Order #:	
Project Name:	Lead & Copper Testing
Project #:	Randolph Career Academy

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	Will Cole
Pace Profile #:	Profile 236 - Line 2

Regulatory Agency
State / Location
MI

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Lead & Copper	Residual Chlorine (Y/N)	(14.29)
1	1-HW-DWF-1	DW	G			7/25/2018	1027		1			X							X		
2	1-HW-DWF-2	DW	G			7/25/2018	1029		1			X							X		
3	2-HW-DWF-3	DW	G			7/25/2018	1030		1			X							X		
4	2-SR-SRF-4	DW	G			7/25/2018	1049		1			X							X		
5	2-HW-B-5	DW	G			7/25/2018	1037		1			X							X		
6	1-HW-DWF-7	DW	G			7/25/2018	1054		1			X							X		
7	1-HW-DWF-8	DW	G			7/25/2018	1055		1			X							X		
8	1-HW-DWF-9	DW	G			7/25/2018	1059		1			X							X		
9	1-HW-DWF-10	DW	G			7/25/2018	1100		1			X							X		
10	1-102.1-SRF-12	DW	G			7/25/2018	1025		1			X							X		
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature] ATC	7/25/18	1334	[signature]	7/25/18	1350	
	[signature]	7/25/18	1920	[signature]	7/25/18	1920	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Andrew Ketchum

SIGNATURE of SAMPLER: [signature] DATE Signed: 7/25/2018

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLE RECEIVING / LOG-IN CHECKLIST

Pace Analytical®

Client: ATC- Randolph Career	Work Order #: 4615401	
Receipt Record Page/Line #: (14-29)		
Recorded by (initials/date): aw 07/25/18	☑ Cooler ☐ Box ☐ Other ___ Qty Received: 1	Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ IR Gun (#402)

Cooler # — Time 2100	Cooler # — Time	Cooler # — Time	Cooler # — Time
Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Type: ☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☑ None	Coolant Type: ☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Coolant Type: ☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Coolant Type: ☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ 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: ☐ Yes ☑ No	Temp Blank Present: ☐ Yes ☐ No	Temp Blank Present: ☐ Yes ☐ No	Temp Blank Present: ☐ Yes ☐ No
If Present, Temperature Blank Location is: ☐ Representative ☐ Not Representative	If Present, Temperature Blank Location is: ☐ Representative ☐ Not Representative	If Present, Temperature Blank Location is: ☐ Representative ☐ Not Representative	If Present, Temperature Blank Location is: ☐ Representative ☐ Not Representative

Cooler 1:

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:	—	—	—
Sample 1:	27.7	/	27.7
Sample 2:	28.6	/	28.6
Sample 3:	28.4	/	28.4

When above 6 °C take a 3 Sample Average °C: 28.2

☐ VOC Trip Blank received?

Coolers 2–4:

	Observed °C	Correction Factor °C	Actual °C
Temp Blank:			
Sample 1:			
Sample 2:			
Sample 3:			

When above 6 °C take a 3 Sample Average °C:

☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ______
☑		Received for Lab Signed/Date/Time?
☐	☑	USDA Soil Documents?
☐	☑	Sampling / Field Forms?
☐	☑	Other ______

COC Information

☑ Pace COC ☐ Other ______

COC ID Numbers: 19621

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑	☐	All containers indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-Pace containers received?
☑	☐	☐	VOC vials have headspace?
	☐	☑	Extra sample locations?
	☐	☑	Containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Temperature Blank **OR** average sample temperature, ≥6° C?
☐	☑	☐	If "Yes" was thermal preservation required?
☐	☑	☐	If "Yes" were ALL samples collected the same day as receipt?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☑	☐		If "No", add wire tag and fill out Non-Conformance Form?
☑	☐		Received unpreserved Terracore kit?
			If "Yes" unpreserved vials must be frozen

Work Order Not Logged In with Short Hold / Rush

☐ Copies of COC To Lab Areas

Notes

Yes	No	
☑	☐	Were all samples logged into Epic?
☑	☐	Were all samples labelled?
☑	☐	Were samples placed on scan locations?

Initial / Date : aw 07/25/18

Pace Analytical®

AQUEOUS SAMPLE PRESERVATION VERIFICATION

Client: ATC Randolph Career (14-29)

Work Order #: 4615401

Receipt Log #:

Completed By (initials/date): CW 07/25/18

COC ID #: 19621

Adjusted by: _____

Date: _____

Container Type	BP3C or AG3O		BP1-4S		AG2S		BP1-4N Total		BP1-4N Dissolved			
Preservative	NaOH >12		H_2SO_4 <2		H_2SO_4 <2		HNO_3 <2		HNO_3 <2			
pH	Received	Adjusted	Received	Adjusted	Received	Adjusted	Received	Adjusted	Received	Adjusted	Received	Adjusted
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							✓					
COC Line #11												
COC Line #12												

Comments:

pH Strip Reagent or Lot #

☐ HC739245

Other

☑ HC727135

Place a check mark in the Received box if pH is acceptable. If pH is not acceptable, document the Received and Adjusted pH values in the appropriate columns (project manager will review all adjustments at work order release). Never add more than 2x the default preservation volume (see table below for default volumes). Complete and attach a wire tag to all adjusted samples. A Sample Receiving Non-Conformance Report must be completed if a pH adjustment was required.

COC ID #:

Adjusted by: _____

Date: _____

Container Type	BP3C or AG3O		BP1-4S		AG2S		BP1-4N Total		BP1-4N Dissolved			
Preservative	NaOH >12		H_2SO_4 <2		H_2SO_4 <2		HNO_3 <2		HNO_3 <2			
pH	Received	Adjusted	Received	Adjusted	Received	Adjusted	Received	Adjusted	Received	Adjusted	Received	Adjusted
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												
COC Line #11												
COC Line #12												

Comments:

Container Size (mL)	Default Preservative Volume (mL)
Container Types 5 / 23	NaOH
250	1.3
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5
Container Types 6 / 15	HNO_3
125	0.7
250	1.25
500	2.5
1000	5.0