ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

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

September 5, 2018

Mathew Sam
Detroit Public Schools
1601 Farnsworth
Detroit, Michigan 48202

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

SUBJECT: **Drinking Water Screening Report**
Golightly Educational Center
5536 St. Antoine Street
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 3 of the samples analyzed were above the EPA recommended limits of 15 micrograms per liter (ug/L) for lead. None of the samples analyzed were 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 (August 21, 2018)

Sample Number	Location	Description	Total Lead (ug/l)	Total Copper (ug/l)
1-107-B-1	Room 107	Bubbler w/ sink and 2nd sink.	<1.0 ug/L	165 ug/L
1-108-B-2	Room 108 Pre K	Bubbler	2.0 ug/L	146 ug/L
1-109-B-7	Room 109 Pre K	Bubbler	<1.0 ug/L	335 ug/L
1-104-B-8	Room 104 Kindergarten	Bubbler	<1.0 ug/L	209 ug/L
1-105-B-13	Room 105 Kindergarten	Bubbler	3.2 ug/L	165 ug/L
1-103-B-46	Room 103	Bubbler w/ sink and 2nd sink	<1.0 ug/L	306 ug/L
1-102-B-47	Room 102	Bubbler w/ sink and 2nd sink.	2.3 ug/L	240 ug/L
1-110-B-48	Room 110	Bubbler w/ sink and 2nd sink.	1.2 ug/L	206 ug/L
1-111-B-49	Room 111	Bubbler w/ sink and 2nd sink.	<1.0 ug/L	355 ug/L
1-K-KS-15	Kitchen near elevator	3 chamber sink, left	**17.8 ug/L**	198 ug/L

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Sample Number	Location	Description	Total Lead (ug/l)	Total Copper (ug/l)
1-K-KS-16	Kitchen near elevator	3 chamber sink, center	5.3 ug/L	175 ug/L
1-SL-SRF-50	Staff Lounge next to Kitchen	sink	4.7 ug/L	354 ug/L
1-Hall- DWF-18	Next to elevator equipment room	left	<1.0 ug/L	145 ug/L
1-Hall- DWF-19	Next to elevator equipment room	right	<1.0 ug/L	128 ug/L
2-K-KS-22	Kitchen	2 chamber dish washer	1.7 ug/L	158 ug/L
2-K-KS-23	Kitchen	2 chamber dish washer	1.6 ug/L	169 ug/L
2-Hall- DWF-20	Next to Kitchen	left	<1.0 ug/L	94.1 ug/L
2-Hall- DWF-21	Next to Kitchen	right	<1.0 ug/L	95.1 ug/L
2-207-DWF-51	Cafeteria 207	left	<1.0 ug/L	92.6 ug/L
2-207-DWF-52	Cafeteria 207	right	<1.0 ug/L	64.3 ug/L
2-Hall-DWF-27	Across from room 201	left	<1.0 ug/L	70.6 ug/L
2-Hall-DWF-28	Across from room 201	right	<1.0 ug/L	95.8 ug/L
2-SL-SRF-26	Staff Lounge, across from Kitchen	Staff sink	1.3 ug/L	137 ug/L
1-Hall-DWF-29	Hall to new building, near gym	left	**19.2 ug/L**	284 ug/L
1-Hall-B-30	Hall to new building, near gym	right	9.7 ug/L	14.1 ug/L
1-Hall-B-32	Across from room 105, original building	left	4.5 ug/L	11.7 ug/L

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Sample Number	Location	Description	Total Lead (ug/l)	Total Copper (ug/l)
1-Hall-B-33	Across from room 105, original building	right	3.2 ug/L	35.2 ug/L
1-K-KS-36	Kitchen, original building	2 chamber sink, 1 faucet	3.5 ug/L	188 ug/L
2-Hall-B-38	Across from room 206, original building	left	6.4 ug/L	39.4 ug/L
2-Hall-B-39	Across from room 206, original building	right	12.8 ug/L	26.0 ug/L
3-Hall-B-43	Across from room 303, original building	right	9.4 ug/L	2.6 ug/L
3-Hall-DWF-44	Across from room 306, original building	left	6.3 ug/L	242 ug/L
3-Hall-B-45	Across from room 306, original building	right	**29.6 ug/L**	149 ug/L

Key: NA - Not Analyzed

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

Analysis of samples of the 3 chamber sink in kitchen, bubbler in hall to new bldg near gym and the bubbler across from room 306 indicate that lead levels were above the MCL. No 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.

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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.

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: Golightly Educational Center

Address 5536 St. Antoine Street

Fixture Identification	Fixture Location	Fixture Description	Photo #
1-107-B-1	Room 107	Bubbler w/ sink and 2nd sink.	1
1-108-B-2	Room 108 Pre K	Bubbler	2
1-108-CF-3	Room 108 Pre K	Sink to bubbler	3
1-108-CF-4	Room 108 Pre K	Stand alone sink	4
1-109-CF-5	Room 109 Pre K	Stand alone sink	5
1-109-CF-6	Room 109 Pre K	Sink to bubbler	6
1-109-B-7	Room 109 Pre K	Bubbler	7
1-104-B-8	Room 104 Kindergarten	Bubbler	8
1-104-CF-9	Room 104 Kindergarten	Sink to bubbler	9
1-104-CF-10	Room 104 Kindergarten	Stand alone sink	10
1-105-CF-11	Room 105 Kindergarten	Stand alone sink	11
1-105-CF-12	Room 105 Kindergarten	Sink to bubbler	12
1-105-B-13	Room 105 Kindergarten	Bubbler	13
1-K-KS-14	Kitchen near elevator	hand sink	14
1-K-KS-15	Kitchen near elevator	3 chamber sink, left	15
1-K-KS-16	Kitchen near elevator	3 chamber sink, center	16
1-K-KS-17	Kitchen near elevator	Dishwasher, spray nozzle	17
1-Hall- DWF-18	Next to elevator equipment room	left	18
1-Hall- DWF-19	Next to elevator equipment room	right	19
2-Hall- DWF-20	Next to Kitchen	left	20
2-Hall- DWF-21	Next to Kitchen	right	21
2-K-KS-22	Kitchen	2 chamber dish washer	22
2-K-KS-23	Kitchen	2 chamber dish washer	23
2-K-KS-24	Kitchen	Dishwasher, spray nozzle	24

2-K-KS-25	Kitchen	hand sink	25
2-SL-SRF-26	Staff Lounge, across from Kitchen		26
2-Hall-DWF-27	Across from room 201	left	27
2-Hall-DWF-28	Across from room 201	right	28
1-Hall-DWF-29	Hall to new building, near gym	left	29
1-Hall-B-30	Hall to new building, near gym	right	30
1-105-SRF-31	Room 105, original building	hand sink	31
1-Hall-B-32	Across from room 105, original building	left	32
1-Hall-B-33	Across from room 105, original building	right	33
1-Hall-DWF-34	Across from room 106, original building	left. NOT WORKING	34
1-Hall-B-35	Across from room 106, original building	right. NOT WORKING	35
1-K-KS-36	Kitchen, original building	2 chamber sink, 1 faucet	36
1-K-KS-37	Kitchen, original building	hand sink	37
2-Hall-B-38	Across from room 206, original building	left	38
2-Hall-B-39	Across from room 206, original building	right	39
2-Hall-B-40	Across from room 203, original building	left. NOT WORKING	40
2-Hall-B-41	Across from room 203, original building	right. NOT WORKING	41
3-Hall-B-42	Across from room 303, original building	left. NOT WORKING	42
3-Hall-B-43	Across from room 303, original building	right	43
3-Hall-DWF-44	Across from room 306, original building	left	44
3-Hall-B-45	Across from room 306, original building	right	45

Photo 1: Bubbler in 107.

Photo 2: Bubbler in 108.

Photo 3: Classroom faucet in 108.

Photo 4: Classroom faucet in 108.

Photo 5: Classroom faucet in 109.

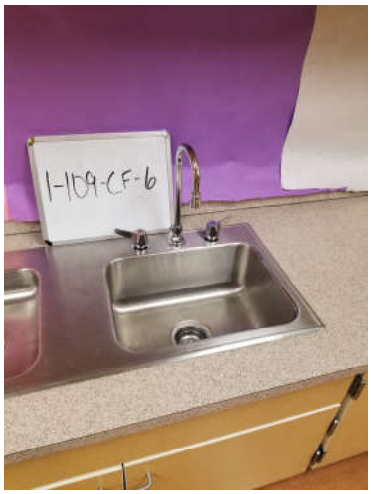

Photo 6: Classroom faucet in 109.

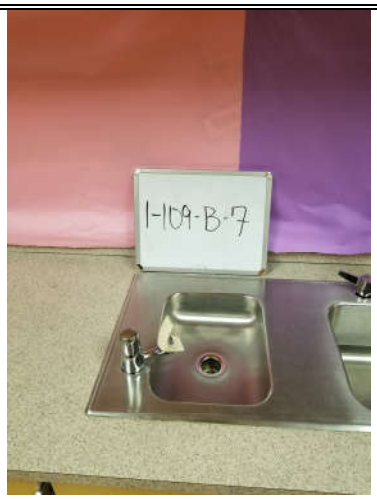

Photo 7: Bubbler in 109.

Photo 8: Bubbler in 104.

Photo 9: Classroom faucet in 104.

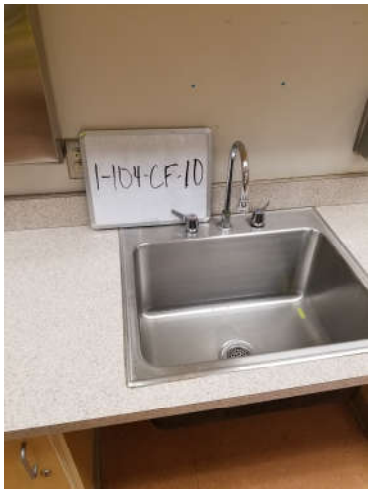

Photo 10: Classroom faucet in 104.

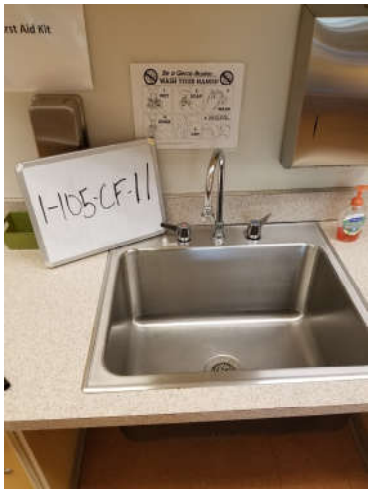

Photo 11: Classroom faucet in 105.

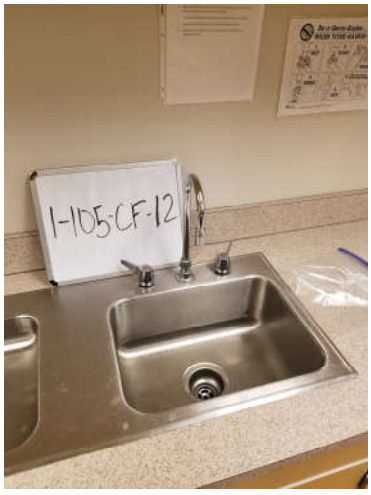

Photo 12: Classroom faucet in 105.

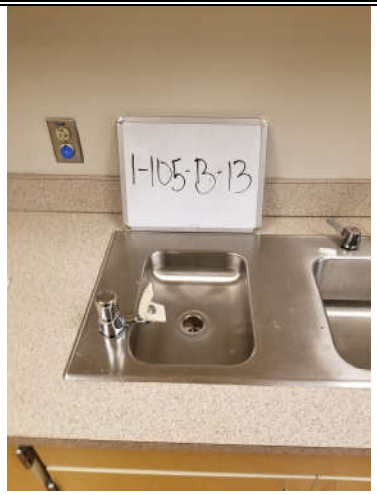

Photo 13: Bubbler in 105.

Photo 14: Kitchen sink, located on the 1st floor in the kitchen. From left to right.

Photo 15: Kitchen sink, located on the 1st floor in the kitchen. From left to right.

Photo 16: Kitchen sink, located on the 1st floor in the kitchen. From left to right.

Photo 17: Kitchen sink, located on the 1st floor in the kitchen. From left to right.

Photo 18: Drinking water fountain, on the 1st floor next to the elevator equipment room.

Photo 19: Drinking water fountain, on the 1st floor next to the elevator equipment room.

Photo 20: Drinking water fountain, on the 2nd floor next to the kitchen.

Photo 21: Drinking water fountain, on the 2nd floor next to the kitchen.

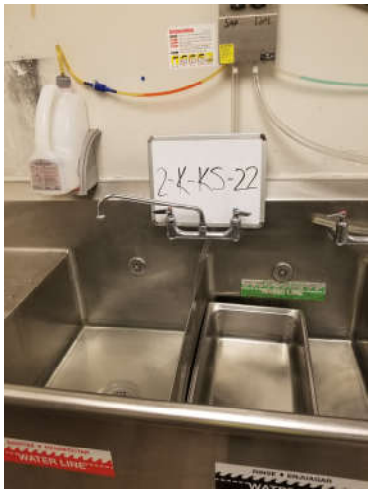

Photo 22: Kitchen sink, located on the 2nd floor in the kitchen. From left to right.

Photo 23: Kitchen sink, located on the 2nd floor in the kitchen. From left to right.

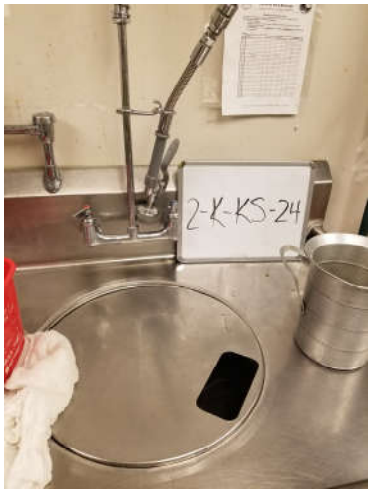

Photo 24: Kitchen sink, located on the 2nd floor in the kitchen. From left to right.

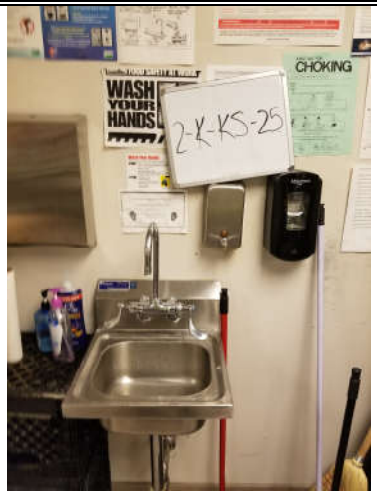

Photo 25: Kitchen sink, located on the 2nd floor in the kitchen. From left to right.

Photo 26: Staff room faucet, located in the staff lounge on the 2nd floor.

Photo 27: Drinking water fountain, located on the 2nd floor across from 201.

Photo 28: Drinking water fountain, located on the 2nd floor across from 201.

Photo 29: Drinking water fountain, located on the 1st floor in the new building near the gym.

Photo 30: Bubbler, located on the 1st floor in the new building near the gym.

Photo 31: Staff room faucet, located in 105. .

Photo 32: Bubbler, located on the 1st floor in the new building across from 105.

Photo 33: Bubbler, located on the 1st floor in the new building across from 105.

Photo 34: Drinking water fountain, located on the 1st floor in the new building across from 106.

Photo 35: Bubbler, located on the 1st floor in the new building across from 106.

Photo 36: Kitchen sink, located on the 1st floor in the new building.

Photo 37: Kitchen sink, located on the 1st floor in the new building.

Photo 38: Bubbler, located on the 1st floor in the new building across from 206.

Photo 39: Bubbler, located on the 1st floor in the new building across from 206.

Photo 40: Bubbler, located on the 1st floor in the new building across from 203.

Photo 41: Bubbler, located on the 1st floor in the new building across from 203.

Photo 42: Bubbler, located on the 1st floor in the new building across from 303.

Photo 43: Bubbler, located on the 1st floor in the new building across from 303.

Photo 44: Bubbler, located on the 1st floor in the new building across from 306.

Photo 45: Bubbler, located on the 1st floor in the new building across from 306.

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

August 21, 2018

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

RE: Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Dear Robert Smith:
Enclosed are the analytical results for sample(s) received by the laboratory on August 08, 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-Golightly Educational Cntr.
Pace Project No.: 4616083

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

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

SAMPLE SUMMARY

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4616083001	**1-107-B-1**	Drinking Water	08/03/18 10:25	08/08/18 17:35
4616083002	**1-108-B-2**	Drinking Water	08/03/18 10:30	08/08/18 17:35
4616083003	**1-109-B-7**	Drinking Water	08/03/18 10:33	08/08/18 17:35
4616083004	**1-104-B-8**	Drinking Water	08/03/18 10:36	08/08/18 17:35
4616083005	**1-105-B-13**	Drinking Water	08/03/18 10:39	08/08/18 17:35
4616083006	**1-103-B-46**	Drinking Water	08/03/18 10:51	08/08/18 17:35
4616083007	**1-102-B-47**	Drinking Water	08/03/18 10:53	08/08/18 17:35
4616083008	**1-110-B-48**	Drinking Water	08/03/18 10:55	08/08/18 17:35
4616083009	**1-111-B-49**	Drinking Water	08/03/18 10:57	08/08/18 17:35
4616083010	**1-K-KS-15**	Drinking Water	08/03/18 11:01	08/08/18 17:35
4616083011	**1-K-KS-16**	Drinking Water	08/03/18 11:02	08/08/18 17:35
4616083012	**1-SL-SRF-50**	Drinking Water	08/03/18 11:05	08/08/18 17:35
4616083013	**1-Hall-DWF-18**	Drinking Water	08/03/18 11:06	08/08/18 17:35
4616083014	**1-Hall-DWF-19**	Drinking Water	08/03/18 11:06	08/08/18 17:35
4616083015	**2-K-KS-22**	Drinking Water	08/03/18 11:15	08/08/18 17:35
4616083016	**2-K-KS-23**	Drinking Water	08/03/18 11:15	08/08/18 17:35
4616083017	**2-Hall-DWF-20**	Drinking Water	08/03/18 11:18	08/08/18 17:35
4616083018	**2-Hall-DWF-21**	Drinking Water	08/03/18 11:18	08/08/18 17:35
4616083019	**2-207-DWF-51**	Drinking Water	08/03/18 11:24	08/08/18 17:35
4616083020	**2-207-DWF-52**	Drinking Water	08/03/18 11:24	08/08/18 17:35
4616083021	**2-Hall-DWF-27**	Drinking Water	08/03/18 11:30	08/08/18 17:35
4616083022	**2-Hall-DWF-28**	Drinking Water	08/03/18 11:30	08/08/18 17:35
4616083023	**2-SL-SRF-26**	Drinking Water	08/03/18 11:35	08/08/18 17:35
4616083024	**1-Hall-DWF-29**	Drinking Water	08/03/18 11:43	08/08/18 17:35
4616083025	**1-Hall-B-30**	Drinking Water	08/03/18 11:43	08/08/18 17:35
4616083026	**1-Hall-B-32**	Drinking Water	08/03/18 11:48	08/08/18 17:35
4616083027	**1-Hall-B-33**	Drinking Water	08/03/18 11:48	08/08/18 17:35
4616083028	**1-K-KS-36**	Drinking Water	08/03/18 11:54	08/08/18 17:35
4616083029	**2-Hall-B-38**	Drinking Water	08/03/18 12:05	08/08/18 17:35
4616083030	**2-Hall-B-39**	Drinking Water	08/03/18 12:05	08/08/18 17:35
4616083031	**3-Hall-B-43**	Drinking Water	08/03/18 12:12	08/08/18 17:35
4616083032	**3-Hall-DWF-44**	Drinking Water	08/03/18 12:08	08/08/18 17:35
4616083033	**3-Hall-B-45**	Drinking Water	08/03/18 12:08	08/08/18 17:35

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

SAMPLE ANALYTE COUNT

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4616083001	**1-107-B-1**	EPA 200.8	NHAM	2
4616083002	**1-108-B-2**	EPA 200.8	NHAM	2
4616083003	**1-109-B-7**	EPA 200.8	NHAM	2
4616083004	**1-104-B-8**	EPA 200.8	NHAM	2
4616083005	**1-105-B-13**	EPA 200.8	NHAM	2
4616083006	**1-103-B-46**	EPA 200.8	NHAM	2
4616083007	**1-102-B-47**	EPA 200.8	NHAM	2
4616083008	**1-110-B-48**	EPA 200.8	NHAM	2
4616083009	**1-111-B-49**	EPA 200.8	NHAM	2
4616083010	**1-K-KS-15**	EPA 200.8	NHAM	2
4616083011	**1-K-KS-16**	EPA 200.8	NHAM	2
4616083012	**1-SL-SRF-50**	EPA 200.8	NHAM	2
4616083013	**1-Hall-DWF-18**	EPA 200.8	NHAM	2
4616083014	**1-Hall-DWF-19**	EPA 200.8	NHAM	2
4616083015	**2-K-KS-22**	EPA 200.8	NHAM	2
4616083016	**2-K-KS-23**	EPA 200.8	NHAM	2
4616083017	**2-Hall-DWF-20**	EPA 200.8	NHAM	2
4616083018	**2-Hall-DWF-21**	EPA 200.8	NHAM	2
4616083019	**2-207-DWF-51**	EPA 200.8	NHAM	2
4616083020	**2-207-DWF-52**	EPA 200.8	NHAM	2
4616083021	**2-Hall-DWF-27**	EPA 200.8	NHAM	2
4616083022	**2-Hall-DWF-28**	EPA 200.8	NHAM	2
4616083023	**2-SL-SRF-26**	EPA 200.8	NHAM	2
4616083024	**1-Hall-DWF-29**	EPA 200.8	NHAM	2
4616083025	**1-Hall-B-30**	EPA 200.8	NHAM	2
4616083026	**1-Hall-B-32**	EPA 200.8	NHAM	2
4616083027	**1-Hall-B-33**	EPA 200.8	NHAM	2
4616083028	**1-K-KS-36**	EPA 200.8	NHAM	2
4616083029	**2-Hall-B-38**	EPA 200.8	NHAM	2
4616083030	**2-Hall-B-39**	EPA 200.8	NHAM	2
4616083031	**3-Hall-B-43**	EPA 200.8	NHAM	2
4616083032	**3-Hall-DWF-44**	EPA 200.8	NHAM	2
4616083033	**3-Hall-B-45**	EPA 200.8	NHAM	2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-107-B-1 **Lab ID: 4616083001** Collected: 08/03/18 10:25 Received: 08/08/18 17:35 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	**165**	ug/L	5.0	1300	5		08/20/18 13:44	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 13:55	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-108-B-2 **Lab ID: 4616083002** Collected: 08/03/18 10:30 Received: 08/08/18 17:35 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	**146**	ug/L	5.0	1300	5		08/20/18 13:48	7440-50-8	
Lead	**2.0**	ug/L	1.0	15	1		08/17/18 14:00	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-109-B-7 **Lab ID: 4616083003** Collected: 08/03/18 10:33 Received: 08/08/18 17:35 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	**335**	ug/L	5.0	1300	5		08/20/18 13:49	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:03	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-104-B-8 **Lab ID: 4616083004** Collected: 08/03/18 10:36 Received: 08/08/18 17:35 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	**209**	ug/L	5.0	1300	5		08/20/18 13:50	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:04	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-105-B-13 **Lab ID: 4616083005** Collected: 08/03/18 10:39 Received: 08/08/18 17:35 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	**165**	ug/L	5.0	1300	5		08/20/18 13:51	7440-50-8	
Lead	**3.2**	ug/L	1.0	15	1		08/17/18 14:05	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-103-B-46 **Lab ID: 4616083006** Collected: 08/03/18 10:51 Received: 08/08/18 17:35 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	**306**	ug/L	5.0	1300	5		08/20/18 13:52	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:06	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-102-B-47 **Lab ID: 4616083007** Collected: 08/03/18 10:53 Received: 08/08/18 17:35 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	**240**	ug/L	5.0	1300	5		08/20/18 13:56	7440-50-8	
Lead	**2.3**	ug/L	1.0	15	1		08/17/18 14:08	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-110-B-48 **Lab ID: 4616083008** Collected: 08/03/18 10:55 Received: 08/08/18 17:35 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	**206**	ug/L	5.0	1300	5		08/20/18 13:57	7440-50-8	
Lead	**1.2**	ug/L	1.0	15	1		08/17/18 14:09	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-111-B-49 **Lab ID: 4616083009** Collected: 08/03/18 10:57 Received: 08/08/18 17:35 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	**355**	ug/L	5.0	1300	5		08/20/18 13:58	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:10	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-K-KS-15 **Lab ID: 4616083010** Collected: 08/03/18 11:01 Received: 08/08/18 17:35 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	**198**	ug/L	5.0	1300	5		08/20/18 13:59	7440-50-8	
Lead	**17.8**	ug/L	1.0	15	1		08/17/18 14:11	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-K-KS-16 **Lab ID: 4616083011** Collected: 08/03/18 11:02 Received: 08/08/18 17:35 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	**175**	ug/L	5.0	1300	5		08/20/18 14:00	7440-50-8	
Lead	**5.3**	ug/L	1.0	15	1		08/17/18 14:12	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-SL-SRF-50 **Lab ID: 4616083012** Collected: 08/03/18 11:05 Received: 08/08/18 17:35 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	**354**	ug/L	5.0	1300	5		08/20/18 14:04	7440-50-8	
Lead	**4.7**	ug/L	1.0	15	1		08/17/18 14:18	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-Hall-DWF-18 **Lab ID: 4616083013** Collected: 08/03/18 11:06 Received: 08/08/18 17:35 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	**145**	ug/L	5.0	1300	5		08/20/18 14:05	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:20	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-Hall-DWF-19 **Lab ID: 4616083014** Collected: 08/03/18 11:06 Received: 08/08/18 17:35 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	**128**	ug/L	5.0	1300	5		08/20/18 14:10	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:21	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-K-KS-22 **Lab ID: 4616083015** Collected: 08/03/18 11:15 Received: 08/08/18 17:35 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	**158**	ug/L	5.0	1300	5		08/20/18 14:11	7440-50-8	
Lead	**1.7**	ug/L	1.0	15	1		08/17/18 14:22	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-K-KS-23 **Lab ID: 4616083016** Collected: 08/03/18 11:15 Received: 08/08/18 17:35 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	**169**	ug/L	5.0	1300	5		08/20/18 14:12	7440-50-8	
Lead	**1.6**	ug/L	1.0	15	1		08/17/18 14:23	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-Hall-DWF-20 **Lab ID: 4616083017** Collected: 08/03/18 11:18 Received: 08/08/18 17:35 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	**94.1**	ug/L	1.0	1300	1		08/17/18 14:24	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:24	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-Hall-DWF-21 **Lab ID: 4616083018** Collected: 08/03/18 11:18 Received: 08/08/18 17:35 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	**95.1**	ug/L	1.0	1300	1		08/17/18 14:25	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:25	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-207-DWF-51 **Lab ID: 4616083019** Collected: 08/03/18 11:24 Received: 08/08/18 17:35 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	**92.6**	ug/L	1.0	1300	1		08/17/18 14:26	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:26	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-207-DWF-52 **Lab ID: 4616083020** Collected: 08/03/18 11:24 Received: 08/08/18 17:35 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	**64.3**	ug/L	1.0	1300	1		08/17/18 14:31	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/17/18 14:31	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-Hall-DWF-27 **Lab ID: 4616083021** Collected: 08/03/18 11:30 Received: 08/08/18 17:35 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	**70.6**	ug/L	1.0	1300	1		08/20/18 10:31	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/20/18 10:31	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-Hall-DWF-28 **Lab ID: 4616083022** Collected: 08/03/18 11:30 Received: 08/08/18 17:35 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	**95.8**	ug/L	1.0	1300	1		08/20/18 10:35	7440-50-8	
Lead	**<1.0**	ug/L	1.0	15	1		08/20/18 10:35	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-SL-SRF-26 **Lab ID: 4616083023** Collected: 08/03/18 11:35 Received: 08/08/18 17:35 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	**137**	ug/L	5.0	1300	5		08/20/18 14:13	7440-50-8	
Lead	**1.3**	ug/L	1.0	15	1		08/20/18 10:36	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-Hall-DWF-29 **Lab ID: 4616083024** Collected: 08/03/18 11:43 Received: 08/08/18 17:35 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	**284**	ug/L	5.0	1300	5		08/20/18 14:15	7440-50-8	
Lead	**19.2**	ug/L	1.0	15	1		08/20/18 10:37	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-Hall-B-30 **Lab ID: 4616083025** Collected: 08/03/18 11:43 Received: 08/08/18 17:35 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	**14.1**	ug/L	1.0	1300	1		08/20/18 10:38	7440-50-8	
Lead	**9.7**	ug/L	1.0	15	1		08/20/18 10:38	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-Hall-B-32 **Lab ID: 4616083026** Collected: 08/03/18 11:48 Received: 08/08/18 17:35 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	**11.7**	ug/L	1.0	1300	1		08/20/18 10:41	7440-50-8	
Lead	**4.5**	ug/L	1.0	15	1		08/20/18 10:41	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-Hall-B-33 **Lab ID: 4616083027** Collected: 08/03/18 11:48 Received: 08/08/18 17:35 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	**35.2**	ug/L	1.0	1300	1		08/20/18 10:43	7440-50-8	
Lead	**3.2**	ug/L	1.0	15	1		08/20/18 10:43	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 1-K-KS-36 **Lab ID: 4616083028** Collected: 08/03/18 11:54 Received: 08/08/18 17:35 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	**188**	ug/L	5.0	1300	5		08/20/18 14:16	7440-50-8	
Lead	**3.5**	ug/L	1.0	15	1		08/20/18 10:44	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-Hall-B-38 **Lab ID: 4616083029** Collected: 08/03/18 12:05 Received: 08/08/18 17:35 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	**39.4**	ug/L	1.0	1300	1		08/20/18 10:45	7440-50-8	
Lead	**6.4**	ug/L	1.0	15	1		08/20/18 10:45	7439-92-1	

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 2-Hall-B-39 **Lab ID: 4616083030** Collected: 08/03/18 12:05 Received: 08/08/18 17:35 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	**26.0**	ug/L	1.0	1300	1		08/20/18 10:46	7440-50-8	
Lead	**12.8**	ug/L	1.0	15	1		08/20/18 10:46	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 3-Hall-B-43 **Lab ID: 4616083031** Collected: 08/03/18 12:12 Received: 08/08/18 17:35 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	**2.6**	ug/L	1.0	1300	1		08/20/18 10:47	7440-50-8	
Lead	**9.4**	ug/L	1.0	15	1		08/20/18 10:47	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-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 3-Hall-DWF-44 **Lab ID: 4616083032** Collected: 08/03/18 12:08 Received: 08/08/18 17:35 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	**242**	ug/L	5.0	1300	5		08/20/18 14:17	7440-50-8	
Lead	**6.3**	ug/L	1.0	15	1		08/20/18 10:51	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-Golightly Educational Cntr.
Pace Project No.: 4616083

Sample: 3-Hall-B-45 **Lab ID: 4616083033** Collected: 08/03/18 12:08 Received: 08/08/18 17:35 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	**149**	ug/L	5.0	1300	5		08/20/18 14:18	7440-50-8	
Lead	**29.6**	ug/L	1.0	15	1		08/20/18 11:22	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

QC Batch: 31063 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: ICPMS Metals, No Prep
Associated Lab Samples: 4616083001, 4616083002, 4616083003, 4616083004, 4616083005, 4616083006, 4616083007, 4616083008, 4616083009, 4616083010, 4616083011, 4616083012, 4616083013, 4616083014, 4616083015, 4616083016, 4616083017, 4616083018, 4616083019, 4616083020

METHOD BLANK: 125076 Matrix: Water
Associated Lab Samples: 4616083001, 4616083002, 4616083003, 4616083004, 4616083005, 4616083006, 4616083007, 4616083008, 4616083009, 4616083010, 4616083011, 4616083012, 4616083013, 4616083014, 4616083015, 4616083016, 4616083017, 4616083018, 4616083019, 4616083020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	<1.0	1.0	08/17/18 13:53	
Lead	ug/L	<1.0	1.0	08/17/18 13:53	

LABORATORY CONTROL SAMPLE: 125077

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	20	20.5	102	85-115	
Lead	ug/L	20	19.7	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 125079 125078

Parameter	Units	4616083001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	165	160	160	323	321	98	98	70-130	0	20	
Lead	ug/L	<1.0	20	20	21.8	20.6	104	98	70-130	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 125081 125082

Parameter	Units	4616083011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	175	160	160	324	331	93	98	70-130	2	20	
Lead	ug/L	5.3	20	20	25.0	25.5	98	101	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

QUALITY CONTROL DATA

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

QC Batch: 31065 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: ICPMS Metals, No Prep
Associated Lab Samples: 4616083021, 4616083022, 4616083023, 4616083024, 4616083025, 4616083026, 4616083027, 4616083028, 4616083029, 4616083030, 4616083031, 4616083032, 4616083033

METHOD BLANK: 125084 Matrix: Water
Associated Lab Samples: 4616083021, 4616083022, 4616083023, 4616083024, 4616083025, 4616083026, 4616083027, 4616083028, 4616083029, 4616083030, 4616083031, 4616083032, 4616083033

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	<1.0	1.0	08/20/18 10:28	
Lead	ug/L	<1.0	1.0	08/20/18 10:28	

LABORATORY CONTROL SAMPLE: 125085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	20	19.8	99	85-115	
Lead	ug/L	20	19.5	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 125086 125087

Parameter	Units	4616083021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	70.6	20	20	87.1	88.5	83	90	70-130	2	20	
Lead	ug/L	<1.0	20	20	19.9	20.3	97	99	70-130	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 125089 125090

Parameter	Units	4616083031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	2.6	20	20	22.3	22.0	98	97	70-130	1	20	
Lead	ug/L	9.4	20	20	28.7	28.5	96	95	70-130	1	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-Golightly Educational Cntr.
Pace Project No.: 4616083

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DW-Golightly Educational Cntr.
Pace Project No.: 4616083

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4616083001	**1-107-B-1**	EPA 200.8	31063		
4616083002	**1-108-B-2**	EPA 200.8	31063		
4616083003	**1-109-B-7**	EPA 200.8	31063		
4616083004	**1-104-B-8**	EPA 200.8	31063		
4616083005	**1-105-B-13**	EPA 200.8	31063		
4616083006	**1-103-B-46**	EPA 200.8	31063		
4616083007	**1-102-B-47**	EPA 200.8	31063		
4616083008	**1-110-B-48**	EPA 200.8	31063		
4616083009	**1-111-B-49**	EPA 200.8	31063		
4616083010	**1-K-KS-15**	EPA 200.8	31063		
4616083011	**1-K-KS-16**	EPA 200.8	31063		
4616083012	**1-SL-SRF-50**	EPA 200.8	31063		
4616083013	**1-Hall-DWF-18**	EPA 200.8	31063		
4616083014	**1-Hall-DWF-19**	EPA 200.8	31063		
4616083015	**2-K-KS-22**	EPA 200.8	31063		
4616083016	**2-K-KS-23**	EPA 200.8	31063		
4616083017	**2-Hall-DWF-20**	EPA 200.8	31063		
4616083018	**2-Hall-DWF-21**	EPA 200.8	31063		
4616083019	**2-207-DWF-51**	EPA 200.8	31063		
4616083020	**2-207-DWF-52**	EPA 200.8	31063		
4616083021	**2-Hall-DWF-27**	EPA 200.8	31065		
4616083022	**2-Hall-DWF-28**	EPA 200.8	31065		
4616083023	**2-SL-SRF-26**	EPA 200.8	31065		
4616083024	**1-Hall-DWF-29**	EPA 200.8	31065		
4616083025	**1-Hall-B-30**	EPA 200.8	31065		
4616083026	**1-Hall-B-32**	EPA 200.8	31065		
4616083027	**1-Hall-B-33**	EPA 200.8	31065		
4616083028	**1-K-KS-36**	EPA 200.8	31065		
4616083029	**2-Hall-B-38**	EPA 200.8	31065		
4616083030	**2-Hall-B-39**	EPA 200.8	31065		
4616083031	**3-Hall-B-43**	EPA 200.8	31065		
4616083032	**3-Hall-DWF-44**	EPA 200.8	31065		
4616083033	**3-Hall-B-45**	EPA 200.8	31065		

WO# : 4616083

4616083

CHAIN-OF-CUSTODY / Analytical Request Document

19789

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

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:	

Required Project Information:

Report To:	Robert Smith
Copy To:	
Purchase Order #:	
Project Name:	Lead & Copper Testing
Project #:	Golightly Educational Center

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

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	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	Analyses Test Y/N	Lead & Copper	Residual Chlorine (Y/N)	(41-1)
1	1-107-B-1	DW	G	08/03/18	10:25				1			X							X		
2	1-108-B-2	DW	G	08/03/18	10:30				1			X							X		
3	1-109-B-7	DW	G	08/03/18	10:33				1			X							X		
4	1-104-B-8	DW	G	08/03/18	10:36				1			X							X		
5	1-105-B-13	DW	G	08/03/18	10:39				1			X							X		
6	1-103-B-46	DW	G	08/03/18	10:51				1			X							X		
7	1-102-B-47	DW	G	08/03/18	10:53				1			X							X		
8	1-110-B-48	DW	G	08/03/18	10:55				1			X							X		
9	1-111-B-49	DW	G	08/03/18	10:57				1			X							X		
10	1-K-KS-15	DW	G	08/03/18	11:01				1			X							X		
11	1-K-KS-16	DW	G	08/03/18	11:02				1			X							X		
12	1-SL-SRF-50	DW	G	08/03/18	11:05				1			X							X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
1-33 GEC	Fashbaugh / ATC	8/3/18	15:30		8/8/18	1400	
		8/8/18	1735	D. Nardin	8/8/18	1735	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jennifer M. Fashbaugh

SIGNATURE of SAMPLER: Fashbaugh

DATE Signed: 08/03/18

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

WO# : 4616083

PM: WDC Due Date: 08/23/18

CLIENT: ATC

CHAIN-OF-CUSTODY / Analytical Request Document

19790

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

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:	

Required Project Information:

Report To:	Robert Smith
Copy To:	
Purchase Order #:	
Project Name:	Lead & Copper Testing
Project #:	Golightly Educational Center

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

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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

ITEM #	SAMPLE ID	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	Analyses Test: Lead & Copper	Residual Chlorine (Y/N)
																		Y/N	(41-1)
13	1-Hall- DWF-18	DW	G	08/03/18	11:06				1			X						X	
14	1-Hall- DWF-19	DW	G	08/03/18	11:06				1			X						X	
15	2-K-KS-22	DW	G	08/03/18	11:15				1			X						X	
16	2-K-KS-23	DW	G	08/03/18	11:15				1			X						X	
17	2-Hall- DWF-20	DW	G	08/03/18	11:18				1			X						X	
18	2-Hall- DWF-21	DW	G	08/03/18	11:18				1			X						X	
19	2-207-DWF-51	DW	G	08/03/18	11:24				1			X						X	
20	2-207-DWF-52	DW	G	08/03/18	11:24				1			X						X	
21	2-Hall-DWF-27	DW	G	08/03/18	11:30				1			X						X	
22	2-Hall-DWF-28	DW	G	08/03/18	11:30				1			X						X	
23	2-SL-SRF-26	DW	G	08/03/18	11:35				1			X						X	
24	1-Hall-DWF-29	DW	G	08/03/18	11:43				1			X						X	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
1-33 GEC	Fashbaugh/ATC	8/3/18	15:30		8/8/18	1400	
		8/8/18	1735	J. Rhardin	8-8-18	1735	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jennifer M. Fashbaugh

SIGNATURE of SAMPLER: Fashbaugh

DATE Signed: 08/03/18

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

#4616083

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

19791

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	ATC Group Services LLC	Report To:	Robert Smith	Attention:	
Address:	46555 Humboldt Drive, Suite 100	Copy To:		Company Name:	
Novi, MI 48377				Address:	
Email:	robert.smith@atcgs.com	Purchase Order #:		Pace Quote:	
Phone:	248-669-5140 Fax: 248-669-5147	Project Name:	Lead & Copper Testing	Pace Project Manager:	Will Cole
Requested Due Date:		Project #:	Golightly Educational Center	Pace Profile #:	Profile 236 - Line 2

Regulatory Agency	
State / Location	
	MI

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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

ITEM #	SAMPLE ID	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)	(41.1)
25	1-Hall-B-30	DW	G	08/03/18	11:43				1			X							X		
26	1-Hall-B-32	DW	G	08/03/18	11:48				1			X							X		
27	1-Hall-B-33	DW	G	08/03/18	11:48				1			X							X		
28	1-K-KS-36	DW	G	08/03/18	11:54				1			X							X		
29	2-Hall-B-38	DW	G	08/03/18	12:05				1			X							X		
30	2-Hall-B-39	DW	G	08/03/18	12:05				1			X							X		
31	3-Hall-B-43	DW	G	08/03/18	12:12				1			X							X		
32	3-Hall-DWF-44	DW	G	08/03/18	12:08				1			X							X		
33	3-Hall-B-45	DW	G	08/03/18	12:08				1			X							X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
1-33 GEC	Fashbaugh / ATC	8/3/18	15:30		8/8/18	1400	
		8/8/18	1735	J. Hardin	8-8-18	1735	

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Jennifer M. Fashbaugh				
SIGNATURE of SAMPLER:		DATE Signed:	08/03/18	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 | Work Order #: 4616083

Receipt Record Page/Line #: 41-1

Recorded by (initials/date): JW 8-8-18

☑ Cooler ☐ Box ☐ Other _____ | Qty Received: 1

Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☑ IR Gun (#402)

Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is	Observed °C	Correction Factor °C	Actual °C	When above 6 °C take a 3 Sample Average °C	VOC Trip Blank received?
1	1930	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☑ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative	Temp Blank:				
							Sample 1:	0	34.1		
							Sample 2:	0	34.2		
							Sample 3:	0	34.0	34.1	
Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is	Observed °C	Correction Factor °C	Actual °C	When above 6 °C take a 3 Sample Average °C	VOC Trip Blank received?
		☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative	Temp Blank:				
							Sample 1:				
							Sample 2:				
							Sample 3:				
Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is	Observed °C	Correction Factor °C	Actual °C	When above 6 °C take a 3 Sample Average °C	VOC Trip Blank received?
		☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative	Temp Blank:				
							Sample 1:				
							Sample 2:				
							Sample 3:				
Cooler #	Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is	Observed °C	Correction Factor °C	Actual °C	When above 6 °C take a 3 Sample Average °C	VOC Trip Blank received?
		☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative	Temp Blank:				
							Sample 1:				
							Sample 2:				
							Sample 3:				

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: 19789, 19795, 19791

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: JW 8-9-18 ATC

Pace Analytical®

AQUEOUS SAMPLE PRESERVATION VERIFICATION

Client: DTC

Work Order #: 461683

Receipt Log #: 41-1

Completed By (initials/date): JW 8-8-18

COC ID # 19789

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:

COC ID # 19790

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 _____

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.

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

Pace Analytical® AQUEOUS SAMPLE PRESERVATION VERIFICATION

Client: OTC

Work Order #: HL16023

Receipt Log #: 41-1

Completed By (initials/date): DW 8-8-18

COC ID #: 19791

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 _____

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