



November 14, 2017

Project No: 170254

Terry Larkin
New Branches Charter Academy
3663 Poinsettia Avenue SE
Grand Rapids, Michigan 49508

Re: Water Testing
New Branches Charter Academy

Dear Mr. Larkin:

Please find the enclosed laboratory results from water samples Northern Analytical Services, LLC. (NAS) collected at the site. Samples were collected to determine the levels of the lead and copper present in drinking water at each active drinking fountain and sink found in the building. Testing was performed as part of an annual inspection of your building.

Samples were collected on September 27th, 2017 by Juston Rehkopf, a State of Michigan accredited Lead Based Paint Inspector (P05558) of NAS. Samples were collected by filling a single 250 milliliter container, pre-treated by the laboratory with acid, at each faucet/drinking fountain and delivering them to the laboratory for analysis. Sample collection was conducted in the morning prior to the water being used by occupants as a "first draw" sample. NAS did not flush or otherwise run each faucet or fountain prior to sample collection; to our knowledge each faucet and fountain sat dormant for at least 6 hours prior to sample collection.

Once delivered to the laboratory (Pace Analytical), samples were analyzed for the presence of copper and lead in accordance with US EPA method 200.8. A copy of the laboratory report is attached.

According to the US EPA's Lead and Copper rule, which applies to schools and child care facilities that meet the definition of a public water system, the practical quantitation limit (PQL) for lead is 0.005 micrograms of lead per liter of water (mg/L) and 0.050 mg/L for copper. The PQL is the concentration of lead or copper that can be reliably measured within specified limits during routine laboratory operating conditions using approved methods. The action level is the concentration of lead or copper in potable water which determines whether a system may be required to install corrosion control treatment, collect water quality parameter samples, collect source water samples, replace lead service lines, and /or deliver public education about lead. The action level for lead is 0.015 mg/L and 1.3 mg/L for copper.

Essentially the PQL is the limit of detection and the Action Level is the level at which steps should be taken in order to minimize or eliminate exposure to lead or copper. Actions to be taken when the action level is exceeded include the following:

- Public education-provide information to building occupants about the water quality.
- Water quality parameter (WQP) monitoring-establish a routine monitoring program.
- Source water monitoring and source water treatment if necessary.
- Corrosion control treatment (CCT).

Choice Schools Associates
 New Branches Charter Academy
 Water Quality Testing
 Project No. 170254
 November 14, 2017

The following is a summary of our findings:

Sample ID	Location	Copper Concentration (mg/L)	Lead Concentration (mg/L)
NB-1	See Attached Drawing	0.0084	ND
NB-2	See Attached Drawing	0.034	ND
NB-3	See Attached Drawing	0.0047	ND
NB-4	See Attached Drawing	0.0012	ND
NB-5	See Attached Drawing	0.035	ND
NB-6	See Attached Drawing	0.45*	ND
NB-7	See Attached Drawing	0.013	ND
NB-8	See Attached Drawing	0.022	ND
NB-9	See Attached Drawing	0.019	ND
NB-10	See Attached Drawing	0.0016	ND
NB-11	See Attached Drawing	0.0023	ND
NB-12	See Attached Drawing	0.019	ND
NB-13	See Attached Drawing	0.0072	ND
NB-14	See Attached Drawing	0.015	ND
NB-15	See Attached Drawing	0.011	ND
NB-16	See Attached Drawing	0.014	ND
NB-17	See Attached Drawing	0.015	ND
NB-18	See Attached Drawing	0.0057	ND
NB-19	See Attached Drawing	0.084*	ND
NB-20	See Attached Drawing	0.0019	ND
NB-21	See Attached Drawing	0.054*	0.0011
NB-22	See Attached Drawing	0.0040	0.0014
NB-23	See Attached Drawing	0.0093	ND
NB-24	See Attached Drawing	0.0029	ND
NB-25	See Attached Drawing	0.011	ND
NB-26	See Attached Drawing	0.014	ND
NB-27	See Attached Drawing	0.40*	ND
NB-28	See Attached Drawing	0.32*	ND
NB-29	See Attached Drawing	0.18*	ND
NB-30	See Attached Drawing	0.15*	ND
NB-31	See Attached Drawing	0.15*	ND
NB-32	See Attached Drawing	0.47*	0.0022
NB-33	See Attached Drawing	0.014	ND
NB-34	See Attached Drawing	0.048	ND
NB-35	See Attached Drawing	0.055*	ND
NB-36	See Attached Drawing	0.0057	0.0012

Choice Schools Associates
New Branches Charter Academy
Water Quality Testing
Project No. 170254
November 14, 2017

* exceeds the PQL for lead or copper.
**exceeds the action level for lead or copper.

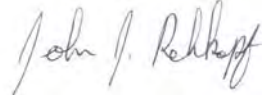
Of the 36 samples collected, 10 exceeded the PQL for copper and none of them exceeded the PQL for lead.

Based on these results, NAS recommends the following actions:

- Re-test all fixtures at least annually and following any major changes to the system.

NAS appreciates the opportunity to provide these services and looks forward to assisting you with any re-testing needed. Please do not hesitate to contact me with any questions.

Sincerely



John J. Rehkopf
President

October 12, 2017

John Rehkopf
Northern Analytical Services
14870 225th Avenue
Big Rapids, MI 49307

RE: Project: New Branches
Pace Project No.: 462924

Dear John Rehkopf:

Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 2017. 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,



Gary Wood
gary.wood@pacelabs.com
(616)940-4206
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: New Branches

Pace Project No.: 462924

Grand Rapids Certification ID's

5560 Corporate Exchange Ct SE, Grand Rapids, MI 49512

ISO/IEC 17025:2005, Certificate #AT-1542.01

DoD-ELAP, Certificate #ADE-1542

Minnesota Department of Health, Certificate #1177224

Arkansas Department of Environmental Quality, Certificate #17-046-0

Georgia Environmental Protection Division, Stipulation

Illinois Environmental Protection Agency, Certificate

#004097

Michigan Department of Environmental Quality, Laboratory

#0034

New York State Department of Health, Serial #56192 and 56193

North Carolina Division of Water Resources, Certificate #659

Virginia Department of General Services, Certificate #9028

Wisconsin Department of Natural Resources, Laboratory #999472650

U.S. Department of Agriculture Permit to Receive Soil, Permit #P330-14-00305

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: New Branches
Pace Project No.: 462924

Lab ID	Sample ID	Matrix	Date Collected	Date Received
462924001	NB1	Drinking Water	09/27/17 10:39	09/29/17 08:53
462924002	NB2	Drinking Water	09/27/17 10:39	09/29/17 08:53
462924003	NB3	Drinking Water	09/27/17 10:43	09/29/17 08:53
462924004	NB4	Drinking Water	09/27/17 10:46	09/29/17 08:53
462924005	NB5	Drinking Water	09/27/17 10:47	09/29/17 08:53
462924006	NB6	Drinking Water	09/27/17 10:51	09/29/17 08:53
462924007	NB7	Drinking Water	09/27/17 10:55	09/29/17 08:53
462924008	NB8	Drinking Water	09/27/17 10:57	09/29/17 08:53
462924009	NB9	Drinking Water	09/27/17 11:00	09/29/17 08:53
462924010	NB10	Drinking Water	09/27/17 11:02	09/29/17 08:53
462924011	NB11	Drinking Water	09/27/17 11:02	09/29/17 08:53
462924012	NB12	Drinking Water	09/27/17 11:03	09/29/17 08:53
462924013	NB13	Drinking Water	09/27/17 11:05	09/29/17 08:53
462924014	NB14	Drinking Water	09/27/17 11:07	09/29/17 08:53
462924015	NB15	Drinking Water	09/27/17 11:07	09/29/17 08:53
462924016	NB16	Drinking Water	09/27/17 11:08	09/29/17 08:53
462924017	NB17	Drinking Water	09/27/17 11:10	09/29/17 08:53
462924018	NB18	Drinking Water	09/27/17 11:13	09/29/17 08:53
462924019	NB19	Drinking Water	09/27/17 11:13	09/29/17 08:53
462924020	NB20	Drinking Water	09/27/17 11:13	09/29/17 08:53
462924021	NB21	Drinking Water	09/27/17 11:13	09/29/17 08:53
462924022	NB22	Drinking Water	09/27/17 11:15	09/29/17 08:53
462924023	NB23	Drinking Water	09/27/17 11:19	09/29/17 08:53
462924024	NB24	Drinking Water	09/27/17 11:19	09/29/17 08:53
462924025	NB25	Drinking Water	09/27/17 11:20	09/29/17 08:53
462924026	NB26	Drinking Water	09/27/17 11:21	09/29/17 08:53
462924027	NB27	Drinking Water	09/27/17 11:23	09/29/17 08:53
462924028	NB28	Drinking Water	09/27/17 11:23	09/29/17 08:53
462924029	NB29	Drinking Water	09/27/17 11:25	09/29/17 08:53
462924030	NB30	Drinking Water	09/27/17 11:25	09/29/17 08:53
462924031	NB31	Drinking Water	09/27/17 11:25	09/29/17 08:53
462924032	NB32	Drinking Water	09/27/17 11:36	09/29/17 08:53
462924033	NB33	Drinking Water	09/27/17 11:39	09/29/17 08:53
462924034	NB34	Drinking Water	09/27/17 11:39	09/29/17 08:53
462924035	NB35	Drinking Water	09/27/17 11:40	09/29/17 08:53
462924036	NB36	Drinking Water	09/27/17 11:47	09/29/17 08:53

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: New Branches

Pace Project No.: 462924

Lab ID	Sample ID	Method	Analysts	Analytes Reported
462924001	NB1	EPA 200.8	CKD	2
462924002	NB2	EPA 200.8	CKD	2
462924003	NB3	EPA 200.8	CKD	2
462924004	NB4	EPA 200.8	CKD	2
462924005	NB5	EPA 200.8	CKD	2
462924006	NB6	EPA 200.8	CKD	2
462924007	NB7	EPA 200.8	CKD	2
462924008	NB8	EPA 200.8	CKD	2
462924009	NB9	EPA 200.8	CKD	2
462924010	NB10	EPA 200.8	CKD	2
462924011	NB11	EPA 200.8	CKD	2
462924012	NB12	EPA 200.8	CKD	2
462924013	NB13	EPA 200.8	CKD	2
462924014	NB14	EPA 200.8	CKD	2
462924015	NB15	EPA 200.8	CKD	2
462924016	NB16	EPA 200.8	CKD	2
462924017	NB17	EPA 200.8	CKD	2
462924018	NB18	EPA 200.8	CKD	2
462924019	NB19	EPA 200.8	CKD	2
462924020	NB20	EPA 200.8	CKD	2
462924021	NB21	EPA 200.8	CKD	2
462924022	NB22	EPA 200.8	CKD	2
462924023	NB23	EPA 200.8	CKD	2
462924024	NB24	EPA 200.8	CKD	2
462924025	NB25	EPA 200.8	CKD	2
462924026	NB26	EPA 200.8	CKD	2
462924027	NB27	EPA 200.8	CKD	2
462924028	NB28	EPA 200.8	CKD	2
462924029	NB29	EPA 200.8	CKD	2
462924030	NB30	EPA 200.8	CKD	2
462924031	NB31	EPA 200.8	CKD	2
462924032	NB32	EPA 200.8	CKD	2
462924033	NB33	EPA 200.8	CKD	2
462924034	NB34	EPA 200.8	CKD	2
462924035	NB35	EPA 200.8	CKD	2
462924036	NB36	EPA 200.8	CKD	2

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB1		Lab ID: 462924001		Collected: 09/27/17 10:39	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0084	mg/L	0.0010	1		10/05/17 16:37	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:37	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB2		Lab ID: 462924002	Collected: 09/27/17 10:39	Received: 09/29/17 08:53	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8							
Copper	0.034	mg/L	0.0010	1		10/05/17 16:38	7440-50-8		
Lead	ND	mg/L	0.0010	1		10/05/17 16:38	7439-92-1		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches
Pace Project No.: 462924

Sample: NB3		Lab ID: 462924003	Collected: 09/27/17 10:43	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 ICPMS Metals, Total		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8						
Copper	0.0047	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:46	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:46	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches
Pace Project No.: 462924

Sample: NB4		Lab ID: 462924004	Collected: 09/27/17 10:46	Received: 09/29/17 08:53	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8							
Copper	0.0012	mg/L	0.0010	1		10/05/17 16:39	7440-50-8		
Lead	ND	mg/L	0.0010	1		10/05/17 16:39	7439-92-1		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB5		Lab ID: 462924005		Collected: 09/27/17 10:47	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.035	mg/L	0.0010	1		10/05/17 16:41	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:41	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB6		Lab ID: 462924006		Collected: 09/27/17 10:51		Received: 09/29/17 08:53		Matrix: Drinking Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8							
Copper	0.45	mg/L	0.0050	5		10/06/17 14:59	7440-50-8		
Lead	ND	mg/L	0.0010	1		10/05/17 16:42	7439-92-1		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches
Pace Project No.: 462924

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: NB7								
Lab ID: 462924007								
Collected: 09/27/17 10:55 Received: 09/29/17 08:53 Matrix: Drinking Water								
200.8 ICPMS Metals, Total								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Copper	0.013	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:52	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:52	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB8		Lab ID: 462924008		Collected: 09/27/17 10:57	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.022	mg/L	0.0010	1		10/05/17 16:43	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:43	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB9		Lab ID: 462924009	Collected: 09/27/17 11:00	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 ICPMS Metals, Total		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8						
Copper	0.019	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:53	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:53	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB10		Lab ID: 462924010	Collected: 09/27/17 11:02	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0016	mg/L	0.0010	1		10/05/17 16:44	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:44	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB11		Lab ID: 462924011	Collected: 09/27/17 11:02	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 ICPMS Metals, Total		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8						
Copper	0.0023	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:55	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:55	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB12		Lab ID: 462924012	Collected: 09/27/17 11:03	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.019	mg/L	0.0010	1		10/05/17 16:46	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:46	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB13		Lab ID: 462924013		Collected: 09/27/17 11:05	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0072	mg/L	0.0010	1		10/05/17 15:42	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 15:42	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB14		Lab ID: 462924014	Collected: 09/27/17 11:07	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 ICPMS Metals, Total		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8						
Copper	0.015	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:59	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 16:59	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB15		Lab ID: 462924015		Collected: 09/27/17 11:07	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 ICPMS Metals, Total		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8						
Copper	0.011	mg/L	0.0010	1	10/09/17 21:24	10/10/17 17:00	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 17:00	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: NB16								
Lab ID: 462924016								
Collected: 09/27/17 11:08 Received: 09/29/17 08:53 Matrix: Drinking Water								
200.8 ICPMS Metals, Total								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Copper	0.014	mg/L	0.0010	1	10/09/17 21:24	10/10/17 17:01	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 17:01	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB17		Lab ID: 462924017		Collected: 09/27/17 11:10		Received: 09/29/17 08:53		Matrix: Drinking Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8							
Copper	0.015	mg/L	0.0010	1		10/05/17 15:50	7440-50-8		
Lead	ND	mg/L	0.0010	1		10/05/17 15:50	7439-92-1		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB18	Lab ID: 462924018	Collected: 09/27/17 11:13	Received: 09/29/17 08:53	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0057	mg/L	0.0010	1		10/05/17 15:55	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 15:55	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB19		Lab ID: 462924019	Collected: 09/27/17 11:13	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.084	mg/L	0.0010	1		10/05/17 15:56	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 15:56	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB20		Lab ID: 462924020	Collected: 09/27/17 11:13	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0019	mg/L	0.0010	1		10/05/17 15:58	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 15:58	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB21		Lab ID: 462924021	Collected: 09/27/17 11:13	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.054	mg/L	0.0010	1		10/05/17 15:59	7440-50-8	
Lead	0.0011	mg/L	0.0010	1		10/05/17 15:59	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB22		Lab ID: 462924022	Collected: 09/27/17 11:15	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0040	mg/L	0.0010	1		10/05/17 16:00	7440-50-8	
Lead	0.0014	mg/L	0.0010	1		10/05/17 16:00	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB23	Lab ID: 462924023	Collected: 09/27/17 11:19		Received: 09/29/17 08:53		Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 ICPMS Metals, Total		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8						
Copper	0.0093	mg/L	0.0010	1	10/09/17 21:24	10/10/17 17:03	7440-50-8	
Lead	ND	mg/L	0.0010	1	10/09/17 21:24	10/10/17 17:03	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB24		Lab ID: 462924024	Collected: 09/27/17 11:19	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0029	mg/L	0.0010	1		10/05/17 16:04	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:04	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB25		Lab ID: 462924025	Collected: 09/27/17 11:20	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.011	mg/L	0.0010	1		10/05/17 16:05	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:05	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches
Pace Project No.: 462924

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
Sample: NB26		Lab ID: 462924026		Collected: 09/27/17 11:21	Received: 09/29/17 08:53	Matrix: Drinking Water			
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8							
Copper	0.014	mg/L	0.0010	1		10/05/17 16:06	7440-50-8		
Lead	ND	mg/L	0.0010	1		10/05/17 16:06	7439-92-1		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB27		Lab ID: 462924027	Collected: 09/27/17 11:23	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.40	mg/L	0.010	10		10/06/17 14:35	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:08	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB28		Lab ID: 462924028		Collected: 09/27/17 11:23	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.32	mg/L	0.0050	5		10/06/17 14:36	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:09	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB29		Lab ID: 462924029		Collected: 09/27/17 11:25	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.18	mg/L	0.0050	5		10/06/17 14:37	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:10	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches
Pace Project No.: 462924

Sample: NB30		Lab ID: 462924030	Collected: 09/27/17 11:25	Received: 09/29/17 08:53	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8							
Copper	0.15	mg/L	0.0050	5		10/06/17 14:38	7440-50-8		
Lead	ND	mg/L	0.0010	1		10/05/17 16:11	7439-92-1		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB31		Lab ID: 462924031		Collected: 09/27/17 11:25		Received: 09/29/17 08:53		Matrix: Drinking Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8							
Copper	0.15	mg/L	0.0050	5		10/06/17 14:40	7440-50-8		
Lead	ND	mg/L	0.0010	1		10/05/17 16:13	7439-92-1		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB32		Lab ID: 462924032	Collected: 09/27/17 11:36	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.47	mg/L	0.010	10		10/06/17 14:41	7440-50-8	
Lead	0.0022	mg/L	0.0010	1		10/05/17 16:14	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches
Pace Project No.: 462924

Sample: NB33		Lab ID: 462924033	Collected: 09/27/17 11:39	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.014	mg/L	0.0010	1		10/05/17 16:52	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:52	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB34		Lab ID: 462924034	Collected: 09/27/17 11:39	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8							
Copper	0.048	mg/L	0.0010	1		10/05/17 16:57	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:57	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches

Pace Project No.: 462924

Sample: NB35		Lab ID: 462924035		Collected: 09/27/17 11:40	Received: 09/29/17 08:53	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.055	mg/L	0.0010	1		10/05/17 16:59	7440-50-8	
Lead	ND	mg/L	0.0010	1		10/05/17 16:59	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: New Branches
Pace Project No.: 462924

Sample: NB36		Lab ID: 462924036	Collected: 09/27/17 11:47	Received: 09/29/17 08:53	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water		Analytical Method: EPA 200.8						
Copper	0.0057	mg/L	0.0010	1		10/05/17 17:00	7440-50-8	
Lead	0.0012	mg/L	0.0010	1		10/05/17 17:00	7439-92-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: New Branches
Pace Project No.: 462924

QC Batch: 6212 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: ICPMS Metals, No Prep
Associated Lab Samples: 462924013, 462924017, 462924018, 462924019, 462924020, 462924021, 462924022, 462924024, 462924025, 462924026, 462924027, 462924028, 462924029, 462924030, 462924031, 462924032

METHOD BLANK: 25557 Matrix: Water
Associated Lab Samples: 462924013, 462924017, 462924018, 462924019, 462924020, 462924021, 462924022, 462924024, 462924025, 462924026, 462924027, 462924028, 462924029, 462924030, 462924031, 462924032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	mg/L	ND	0.0010	10/05/17 15:40	
Lead	mg/L	ND	0.0010	10/05/17 15:40	

LABORATORY CONTROL SAMPLE: 25558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	mg/L	.02	0.020	100	85-115	
Lead	mg/L	.02	0.019	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 25559 25560

Parameter	Units	462924013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	mg/L	0.0072	.02	.02	0.027	0.026	97	93	70-130	3	20	
Lead	mg/L	ND	.02	.02	0.024	0.024	119	118	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 25562 25563

Parameter	Units	462924017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	mg/L	0.015	.02	.02	0.037	0.035	107	100	70-130	4	20	
Lead	mg/L	ND	.02	.02	0.023	0.023	116	116	70-130	0	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: New Branches
Pace Project No.: 462924

QC Batch: 6213 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: ICPMS Metals, No Prep
Associated Lab Samples: 462924001, 462924002, 462924004, 462924005, 462924006, 462924008, 462924010, 462924012

METHOD BLANK: 25565 Matrix: Water
Associated Lab Samples: 462924001, 462924002, 462924004, 462924005, 462924006, 462924008, 462924010, 462924012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	mg/L	ND	0.0010	10/05/17 16:15	
Lead	mg/L	ND	0.0010	10/05/17 16:15	

LABORATORY CONTROL SAMPLE: 25566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	mg/L	.02	0.020	99	85-115	
Lead	mg/L	.02	0.019	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 25567 25568

Parameter	Units	462920081 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result						
Copper	mg/L	0.22	.1	.1	0.31	0.31	90	93	70-130	1	20	
Lead	mg/L	ND	.02	.02	0.024	0.024	118	118	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 25570 25571

Parameter	Units	462920082 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result						
Copper	mg/L	0.21	.1	.1	0.29	0.31	80	102	70-130	8	20	
Lead	mg/L	ND	.02	.02	0.024	0.024	119	118	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: New Branches

Pace Project No.: 462924

QC Batch: 6226 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: ICPMS Metals, No Prep
 Associated Lab Samples: 462924033, 462924034, 462924035, 462924036

METHOD BLANK: 25615 Matrix: Water

Associated Lab Samples: 462924033, 462924034, 462924035, 462924036

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	mg/L	ND	0.0010	10/05/17 16:50	
Lead	mg/L	ND	0.0010	10/05/17 16:50	

LABORATORY CONTROL SAMPLE: 25616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	mg/L	.02	0.020	99	85-115	
Lead	mg/L	.02	0.019	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 25617 25618

Parameter	Units	462924033 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Copper	mg/L	0.014	.02	0.033	.02	0.033	96	97	70-130	1	20	
Lead	mg/L	ND	.02	0.023	.02	0.023	114	113	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: New Branches
Pace Project No.: 462924

QC Batch: 6389 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Associated Lab Samples: 462924003, 462924007, 462924009, 462924011, 462924014, 462924015, 462924016, 462924023

METHOD BLANK: 26230 Matrix: Water
Associated Lab Samples: 462924003, 462924007, 462924009, 462924011, 462924014, 462924015, 462924016, 462924023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	mg/L	ND	0.0010	10/10/17 16:19	
Lead	mg/L	ND	0.0010	10/10/17 16:19	

LABORATORY CONTROL SAMPLE: 26231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	mg/L	.05	0.053	105	85-115	
Lead	mg/L	.05	0.049	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 26232 26233

Parameter	Units	462920050 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	mg/L	0.16	.05	.05	0.21	0.21	98	97	70-130	0	20	
Lead	mg/L	ND	.05	.05	0.050	0.050	99	98	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 26234 26235

Parameter	Units	462924003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	mg/L	0.0047	.05	.05	0.052	0.053	94	97	70-130	3	20	
Lead	mg/L	ND	.05	.05	0.048	0.050	94	99	70-130	5	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: New Branches

Pace Project No.: 462924

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.

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.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: New Branches
Pace Project No.: 462924

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
462924001	NB1	EPA 200.8	6213		
462924002	NB2	EPA 200.8	6213		
462924004	NB4	EPA 200.8	6213		
462924005	NB5	EPA 200.8	6213		
462924006	NB6	EPA 200.8	6213		
462924008	NB8	EPA 200.8	6213		
462924010	NB10	EPA 200.8	6213		
462924012	NB12	EPA 200.8	6213		
462924013	NB13	EPA 200.8	6212		
462924017	NB17	EPA 200.8	6212		
462924018	NB18	EPA 200.8	6212		
462924019	NB19	EPA 200.8	6212		
462924020	NB20	EPA 200.8	6212		
462924021	NB21	EPA 200.8	6212		
462924022	NB22	EPA 200.8	6212		
462924024	NB24	EPA 200.8	6212		
462924025	NB25	EPA 200.8	6212		
462924026	NB26	EPA 200.8	6212		
462924027	NB27	EPA 200.8	6212		
462924028	NB28	EPA 200.8	6212		
462924029	NB29	EPA 200.8	6212		
462924030	NB30	EPA 200.8	6212		
462924031	NB31	EPA 200.8	6212		
462924032	NB32	EPA 200.8	6212		
462924033	NB33	EPA 200.8	6226		
462924034	NB34	EPA 200.8	6226		
462924035	NB35	EPA 200.8	6226		
462924036	NB36	EPA 200.8	6226		
462924003	NB3	EPA 200.8	6389	EPA 200.8	6485
462924007	NB7	EPA 200.8	6389	EPA 200.8	6485
462924009	NB9	EPA 200.8	6389	EPA 200.8	6485
462924011	NB11	EPA 200.8	6389	EPA 200.8	6485
462924014	NB14	EPA 200.8	6389	EPA 200.8	6485
462924015	NB15	EPA 200.8	6389	EPA 200.8	6485
462924016	NB16	EPA 200.8	6389	EPA 200.8	6485
462924023	NB23	EPA 200.8	6389	EPA 200.8	6485

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: **See page 1** Address: **See page 1** Section B Required Project Information: Report To: Copy To: Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: Regulatory Agency: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Requested Due Date/TAT: Project Number: Project Name: **New Branches** Project Number: Requested Analysis Filtered (Y/N): State: **MI**

REGULATORY AGENCY: **2183078** Page: **2** of **3** Page 48 of 52

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	Matrix Code (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol				
1	NB 13	DW	DW	G	11:05												462924-13	-14	
2	NB 14	WT	WT	G	11:07													-13	
3	NB 15	WW	WW	G	11:09													-16	
4	NB 16	P	P	G	11:10													-17	
5	NB 17	SL	SL	G	11:13													-18	
6	NB 18	WP	WP	G	11:13													-19	
7	NB 19	OL	OL	G	11:13													-20	
8	NB 20	AR	AR	G	11:13													-21	
9	NB 21	TS	TS	G	11:15													-22	
10	NB 22	OT	OT	G	11:19													-23	
11	NB 23			G	11:19													-24	
12	NB 24			G	11:19													-24	

ADDITIONAL COMMENTS: **RELINQUISHED BY / AFFILIATION: [Signature] DATE: 9-29-17 TIME: 8:53 AM**
ACCEPTED BY / AFFILIATION: **[Signature] DATE: 9/29/17 TIME: 0853**
SAMPLER NAME AND SIGNATURE: **[Signature]**
PRINT Name of SAMPLER: **Justin Reheport**
SIGNATURE of SAMPLER: **[Signature]**
DATE Signed (MM/DD/YY): **9-29-17**
Temp in °C: _____
Received on Ice (Y/N): _____
Custody Sealed Cooler (Y/N): _____
Samples Intact (Y/N): _____

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month (any invoices not paid within 30 days). F-ALL-Q-020rev.07, 15-May-2007

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: See page 1 Address: See page 1		Section B Required Project Information: Report To: Copy To:		Section C Invoice Information: Attention: Company Name: Address: Purchase Order No.: Pace Quote Reference: Pace Project Manager: Pace Profile #:	
Email To: Phone: Requested Due Date/TAT:		Purchase Order No.: Project Name: New Branches Project Number:		REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RORA <input type="checkbox"/> OTHER	
Matrix Codes MATRIX / CODE		Matrix Code (see valid codes to left)		Requested Analysis Filtered (Y/N)	
Drinking Water DW Water W/T Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT		SAMPLE ID (A-Z, 0-9 / . -) Sample IDs MUST BE UNIQUE		Requested Analysis Filtered (Y/N)	

ITEM #	Matrix Code	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
			COMPOSITE START DATE	COMPOSITE END/GRAB DATE							
1	NB 25	DW G	11:20			Unpreserved					
2	NB 26		11:21			H ₂ SO ₄					Pace Project No./ Lab I.D. 462924 - 25
3	NB 27		11:23			HNO ₃					-26
4	NB 28		11:23			HCl					-27
5	NB 29		11:25			NaOH					-28
6	NB 30		11:25			Na ₂ S ₂ O ₃					-29
7	NB 31		11:25			Methanol					-30
8	NB 32		11:36			Other					-31
9	NB 33		11:39								-32
10	NB 34		11:40								-33
11	NB 35		11:40								-34
12	NB 36		11:47								-35

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: *Asst. Manager* DATE: 9-29-17 TIME: 8:53

ACCEPTED BY / AFFILIATION: *Asst. Manager* DATE: 9/29/17 TIME: 0853

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: *Justin Rehkopf* DATE Signed (MM/DD/YY): 9-29-17

SIGNATURE of SAMPLER: *Justin Rehkopf*

Temp in °C: _____ Received on Ice (Y/N): _____ Custody Sealed Cooler (Y/N): _____ Samples Intact (Y/N): _____

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



SAMPLE RECEIVING / LOG-IN CHECKLIST

Client Northern Analytical	Work Order # 462924
Receipt Record Page/Line # 47-14	New / Add To <input checked="" type="checkbox"/> PS
Project Chemist	Sample #s

Recorded by (initials/date) PS 9/29/17	Cooler <input checked="" type="checkbox"/> Cooler <input type="checkbox"/> Box <input type="checkbox"/> Other	Qty Received 3	IR Gun (#202) Thermometer Used <input type="checkbox"/> Digital Thermometer (#54) <input type="checkbox"/> Other (# _____)	<input type="checkbox"/> See Additional Cooler Information Form
--	--	--------------------------	---	---

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time		
106904	1158	Blue	1201	000144	1206				
Custody Seals: <input checked="" type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input checked="" type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input checked="" type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact			
Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input checked="" type="checkbox"/> None		Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input checked="" type="checkbox"/> None		Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input checked="" type="checkbox"/> None		Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None			
Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom			
Temp Blank Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No			
If Present, Temperature Blank Location is: <input checked="" type="checkbox"/> Representative <input type="checkbox"/> Not Representative		If Present, Temperature Blank Location is: <input checked="" type="checkbox"/> Representative <input type="checkbox"/> Not Representative		If Present, Temperature Blank Location is: <input checked="" type="checkbox"/> Representative <input type="checkbox"/> Not Representative		If Present, Temperature Blank Location is: <input type="checkbox"/> Representative <input type="checkbox"/> Not Representative			
Observed °C	Correction Factor °C	Actual °C	Observed °C	Correction Factor °C	Actual °C	Observed °C	Correction Factor °C	Actual °C	
Temp Blank: 18.7		18.7	Temp Blank: 18.6		18.6	Temp Blank:			
Sample 1: 19.1		19.1	Sample 1: 18.1		18.1	Sample 1:			
Sample 2: 19.2		19.2	Sample 2: 19.0		19.0	Sample 2:			
Sample 3: 18.9		18.9	Sample 3: 18.9		18.9	Sample 3:			
3 Sample Average °C: 19.1			3 Sample Average °C: 18.7			3 Sample Average °C: _____			
<input type="checkbox"/> Cooler ID on COC?		<input type="checkbox"/> Cooler ID on COC?		<input type="checkbox"/> Cooler ID on COC?		<input type="checkbox"/> Cooler ID on COC?		<input type="checkbox"/> Cooler ID on COC?	
<input type="checkbox"/> VOC Trip Blank received?		<input type="checkbox"/> VOC Trip Blank received?		<input type="checkbox"/> VOC Trip Blank received?		<input type="checkbox"/> VOC Trip Blank received?		<input type="checkbox"/> VOC Trip Blank received?	

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

Paperwork Received

Yes No

Chain of Custody record(s)? If No, Initiated By _____

Received for Lab Signed/Date/Time?

Shipping document?

Other _____

COC Information

Pace COC Other _____

COC ID Numbers:
2183077 → 2183079

Check COC for Accuracy

Yes No

Analysis Requested?

Sample ID matches COC?

Sample Date and Time matches COC?

Container type completed on COC?

All container types 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 / TOX containers 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 either is ≥6° C, was thermal preservation required?
If "Yes", Project Chemist Approval Initials: _____
If "Yes" Completed Non Con Cooler - Cont Inventory Form?

Completed Sample Preservation Verification Form?

Samples chemically preserved correctly?
If "No", added orange tag?

Received pre-preserved VOC soils?
 MeOH Na₂SO₄

Check for Short Hold-Time Prep/Analyses

Bacteriological

Air Bags

EnCores / Methanol Pre-Preserved

Formaldehyde/Aldehyde

Green-tagged containers

Yellow/White-tagged 1 L ambers (SV Prep-Lab)

AFTER HOURS ONLY:

COPIES OF COC TO LAB AREA(S)

NONE RECEIVED

RECEIVED, COCs TO LAB(S)

Notes

Drinking Water

Trip Blank received Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
PS 9/29/17	PS 9/29/17	Yes / No



SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 2

Client Northern Analytical	Work Order # 462924
Receipt Log # 47-14	Completed By (initials/date) RS 9/29/17
Project Chemist <i>[Signature]</i>	

COC ID # 2183077				Adjusted by: _____ Date: _____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	6	15						
Tag Color	Lt. Blue	Blue	Brown	Red	Red Stripe						
Preservative	NaOH	H ₂ SO ₄	H ₂ SO ₄	HNO ₃	HNO ₃						
Expected pH	>12	<2	<2	<2	<2						
COC Line #1				✓							
COC Line #2				✓							
COC Line #3				✓							
COC Line #4				✓							
COC Line #5				✓							
COC Line #6				✓							
COC Line #7				✓							
COC Line #8				✓							
COC Line #9				✓							
COC Line #10				✓							
COC Line #11				✓							
COC Line #12				✓							

pH Strip Reagent # / Lot #
<input checked="" type="checkbox"/> HC601354
<input type="checkbox"/> Other

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

Comments

COC ID # 2183078				Adjusted by: _____ Date: _____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	6	15						
Tag Color	Lt. Blue	Blue	Brown	Red	Red Stripe						
Preservative	NaOH	H ₂ SO ₄	H ₂ SO ₄	HNO ₃	HNO ₃						
Expected pH	>12	<2	<2	<2	<2						
COC Line #1				✓							
COC Line #2				✓							
COC Line #3				✓							
COC Line #4				✓							
COC Line #5				✓							
COC Line #6				✓							
COC Line #7				✓							
COC Line #8				✓							
COC Line #9				✓							
COC Line #10				✓							
COC Line #11				✓							
COC Line #12				✓							

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

Comments



SAMPLE PRESERVATION VERIFICATION FORM

page 2 of 2

Client <i>Northern Analytical</i>	Work Order # <i>462924</i>
Receipt Log # <i>47-14</i>	Completed By (initials/date) <i>[Signature] 9/29/17</i>
Project Chemist <i>[Signature]</i>	

COC ID # <i>2183079</i>				Adjusted by: _____ Date: _____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	6	15						
Tag Color	Lt. Blue	Blue	Brown	Red	Red Stripe						
Preservative	NaOH	H ₂ SO ₄	H ₂ SO ₄	HNO ₃	HNO ₃						
Expected pH	>12	<2	<2	<2	<2						
COC Line #1				✓							
COC Line #2				✓							
COC Line #3				✓							
COC Line #4				✓							
COC Line #5				✓							
COC Line #6				✓							
COC Line #7				✓							
COC Line #8				✓							
COC Line #9				✓							
COC Line #10				✓							
COC Line #11				✓							
COC Line #12				✓							

pH Strip Reagent # / Lot #	HC601354
<input checked="" type="checkbox"/>	Other
<input type="checkbox"/>	

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

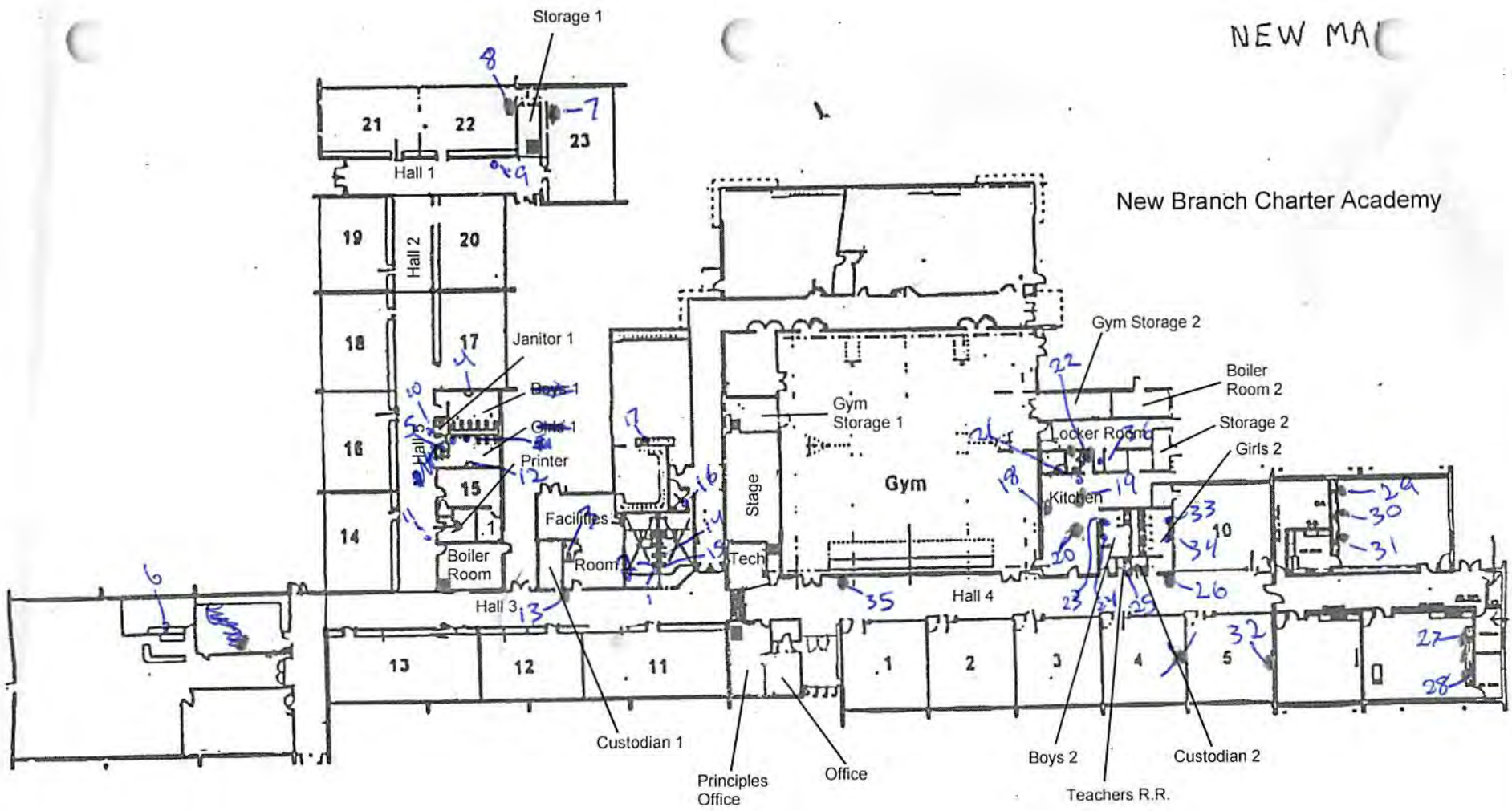
Comments

COC ID #				Adjusted by: _____ Date: _____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	6	15						
Tag Color	Lt. Blue	Blue	Brown	Red	Red Stripe						
Preservative	NaOH	H ₂ SO ₄	H ₂ SO ₄	HNO ₃	HNO ₃						
Expected pH	>12	<2	<2	<2	<2						
COC Line #1											
COC Line #2											
COC Line #3											
COC Line #4											
COC Line #5											
COC Line #6											
COC Line #7											
COC Line #8											
COC Line #9											
COC Line #10											
COC Line #11											
COC Line #12											

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

Comments

New Branch Charter Academy



■ = Tunnel Access