NORTHERN
Analytical Services, LLC.
ENVIRONMENTAL CONSULTANTS

November 14, 2018 Project No: 180307

Nicole Robinson
Creative Montessori Academy
12701 McCann Avenue
Southgate, Michigan 48195

Re: Water Testing
Creative Montessori Academy

Dear Mrs. Robinson:

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 of the fixtures tested. Testing was limited to those fixtures that tested above the detection limit in previous testing. Testing was performed as part of an annual inspection of your building.

Samples were collected on October 3, 2018 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).

14870 225th Ave., Big Rapids, Michigan 49307
Phone : 231-268-0004 Fax : 866-214-4739 Web : www.northernas.com

Choice Schools Associates
Creative Montessori Academy
Water Quality Testing
Project No. 180307
November 14, 2018

The following is a summary of our findings by fixture:

CMA-3 (see attached drawing for location)

Sample Date	Copper Concentration (mg/L)	Lead Concentration (mg/L)
11/14/17	0..35*	ND
10/3/18	0.20*	ND

CMA-19 (see attached drawing for location)

Sample Date	Copper Concentration (mg/L)	Lead Concentration (mg/L)
11/14/17	0.17*	0.0018
10/3/18	0.17*	0.0029

CMA-23 (see attached drawing for location)

Sample Date	Copper Concentration (mg/L)	Lead Concentration (mg/L)
11/14/17	0.045	0.0032
10/3/18	0.010	ND

CMA-25 (see attached drawing for location)

Sample Date	Copper Concentration (mg/L)	Lead Concentration (mg/L)
11/14/17	0.14	0.0013
10/3/18	0.080*	ND

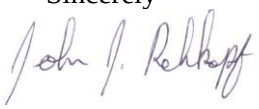
* exceeds the PQL for lead or copper.
**exceeds the action level for lead or copper.

Based on the attached results, NAS recommends the following actions:

- Immediately post the public education poster found in appendix A of the Lead and Copper Rule near each faucet/fountain that exceeded the PQL for lead and distribute a copy of this information in pamphlet form to all building occupants.
- Immediately take the faucets/fountains described in samples TO-5 and TO-21 off line. Flush each of these units (allow water to run for at least 5 minutes) and re-test no sooner than 8 hours after flushing.
- Test the water source to determine the level of lead and copper present; copper levels appear to be elevated in most of the fixtures tested which suggests the water source may be responsible.
- Consider replacing these units if the re-test results exceed the PQL level.
- Consider the installation of point source (faucet/drinking fountain) water filtration for lead.
- Consider the replacement of all water pipes and fixtures as a permanent solution.
- 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

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

October 18, 2018

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

RE: Project: CMA Water Testing
Pace Project No.: 4618669

Dear John Rehkopf:
Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 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,

Melanie Booms

Melanie Booms
melanie.booms@pacelabs.com
(616)975-4500
Project Manager

Enclosures

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

CERTIFICATIONS

Project: CMA Water Testing
Pace Project No.: 4618669

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: CMA Water Testing
Pace Project No.: 4618669

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4618669001	**CMA 3**	Drinking Water	10/03/18 08:54	10/05/18 13:22
4618669002	**CMA 19**	Drinking Water	10/03/18 08:58	10/05/18 13:22
4618669003	**CMA 23**	Drinking Water	10/03/18 09:00	10/05/18 13:22
4618669004	**CMA 25**	Drinking Water	10/03/18 09:01	10/05/18 13:22

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: CMA Water Testing
Pace Project No.: 4618669

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4618669001	**CMA 3**	EPA 200.8	NHAM	2
4618669002	**CMA 19**	EPA 200.8	NHAM	2
4618669003	**CMA 23**	EPA 200.8	NHAM	2
4618669004	**CMA 25**	EPA 200.8	NHAM	2

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ANALYTICAL RESULTS

Project: CMA Water Testing
Pace Project No.: 4618669

Sample: CMA 3 **Lab ID: 4618669001** Collected: 10/03/18 08:54 Received: 10/05/18 13:22 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	**0.20**	mg/L	0.0010		1		10/16/18 09:03	7440-50-8	
Lead	ND	mg/L	0.0010		1		10/16/18 09:03	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CMA Water Testing
Pace Project No.: 4618669

Sample: CMA 19 **Lab ID: 4618669002** Collected: 10/03/18 08:58 Received: 10/05/18 13:22 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	**0.17**	mg/L	0.0010		1		10/16/18 09:04	7440-50-8	
Lead	**0.0029**	mg/L	0.0010		1		10/16/18 09:04	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
Grand Rapids, MI 49512
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ANALYTICAL RESULTS

Project: CMA Water Testing
Pace Project No.: 4618669

Sample: CMA 23 **Lab ID: 4618669003** Collected: 10/03/18 09:00 Received: 10/05/18 13:22 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	**0.010**	mg/L	0.0010		1		10/16/18 09:05	7440-50-8	
Lead	ND	mg/L	0.0010		1		10/16/18 09:05	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Grand Rapids, MI 49512
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ANALYTICAL RESULTS

Project: CMA Water Testing
Pace Project No.: 4618669

Sample: CMA 25 **Lab ID: 4618669004** Collected: 10/03/18 09:01 Received: 10/05/18 13:22 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	**0.080**	mg/L	0.0010		1		10/16/18 09:09	7440-50-8	
Lead	ND	mg/L	0.0010		1		10/16/18 09:09	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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

Project: CMA Water Testing
Pace Project No.: 4618669

QC Batch: 35847 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: ICPMS Metals, No Prep
Associated Lab Samples: 4618669001, 4618669002, 4618669003, 4618669004

METHOD BLANK: 144810 Matrix: Water
Associated Lab Samples: 4618669001, 4618669002, 4618669003, 4618669004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	mg/L	ND	0.0010	10/16/18 08:46	
Lead	mg/L	ND	0.0010	10/16/18 08:46	

LABORATORY CONTROL SAMPLE: 144811

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	mg/L	.02	0.019	96	85-115	
Lead	mg/L	.02	0.020	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 144812 144813

Parameter	Units	4618666001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	mg/L	0.030	.02	.02	0.049	0.048	95	93	70-130	1	20	
Lead	mg/L	ND	.02	.02	0.022	0.022	108	108	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 144815 144816

Parameter	Units	4618669003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	mg/L	0.010	.02	.02	0.029	0.029	96	94	70-130	1	20	
Lead	mg/L	ND	.02	.02	0.023	0.022	111	107	70-130	4	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: CMA Water Testing
Pace Project No.: 4618669

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: CMA Water Testing
Pace Project No.: 4618669

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4618669001	**CMA 3**	EPA 200.8	35847		
4618669002	**CMA 19**	EPA 200.8	35847		
4618669003	**CMA 23**	EPA 200.8	35847		
4618669004	**CMA 25**	EPA 200.8	35847		

WO# : 4618669

4618669

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

2188686

Section A Required Client Information:

Company: Northern Analytical Services
Address: 14870 225th Avenue
Big Rapids, Mi 49307
Email To: john@northernas.com
Phone: 231 679 0005 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: John RehKopf
Copy To:
Purchase Order No.:
Project Name: CMA Water Testing
Project Number: 180307

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 479

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☒ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MI

Section D Required Client Information

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
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 #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	CMA 3	DW	G	10/3/18	8:54 am				1			X								41-20
2	~~CMA 15~~			10/3/18																
3	CMA 19	DW	G	10/3/18	8:58 am				1			X								
4	CMA 23	DW	G	10/3/18	9:00 am				1			X								
5	CMA 25	DW	G	10/3/18	9:01 am				1			X								
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Juston RehKopf	10-5-18	1:19	Lynn Rupel	10/5/18	13:22	

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Juston RehKopf
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10-5-18

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 for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical
www.pacelabs.com

Sample Conditions Upon Re **WO# : 4618669**

Date: 10/5/18	Evaluated by: PS	PM: MSB Due Date: 10/19/18	Pace ber
Client: Northern Analytical		CLIENT: NORTH ANALYT	
Profile ID:	Project Manager:		
Sample Receiving Non Conformance Form Required: YES (NO)		Rush Turn Around Time Requested: YES (NO) Due Date:	
Page Of		Lab Notified of Rush or Short Holds: YES (NO)	

Lab Sample Receipt Checklist:

Samples Received Via:	FEDEX	UPS	(CLIENT)	PACE COURIER
Custody Seals Present and Intact:	YES	NO	(NA)	
USDA Regulated Soils:	YES	(NO)	NA	
Short Holds Present (< 72 Hours):	YES	(NO)	NA	
Samples Received in Hold:	(YES)	NO	NA	
Custody Signatures Present:	(YES)	NO	NA	
Collector Signature Present:	(YES)	NO	NA	
Samples Received On Ice: Type of Ice: WET BLUE DRY (NONE)	YES	(NO)	NA	
Packing Material Used:	YES	(NO)	NA	
IR Gun #: 202 (329) 402 Temp should be 0-6°C	Cooler Temp Upon Receipt: 11.4 °C			
Temp Blank Received:	YES	(NO)	NA	
Trip Blank Received: Type: HCL MeOH TSP OTHER	YES	(NO)	NA	
Bottles Intact:	(YES)	NO	NA	
Correct Bottles:	(YES)	NO	NA	
Sufficient Volume:	(YES)	NO	NA	
Sample pH Acceptable: All containers needing preservation are found to be in complaince with EPA recommendation Exceptions are VOA, coliform, TOC, O & G, HEM, DRO	(YES)	NO	NA	pH Strip Lot Number: HC734245
VOA Headspace Acceptable (<6mm):	YES	NO	(NA)	
Comments: Drinking waters				