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August 1, 2016

Debra Spring  
Matrix Head Start  
2051 Rosa Parks Boulevard  
Detroit, Michigan 48216

SUBMITTED VIA EMAIL TO: dspring@matrix.org

**SUBJECT:      Drinking Water Screening Report  
                 Cathedral of Saint Paul  
                 4800 Woodward Avenue  
                 Detroit, Michigan 48201**

Dear Ms. Spring:

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 TriMatrix Laboratories, for Michigan Department of Environmental Quality (MDEQ) Drinking Water Certified lead analysis.

#### **SCOPE OF WORK**

At the request of the Matrix Head Start (Matrix), ATC collected drinking water samples as a general screening for lead at the subject school. Matrix in coordination with the City of Detroit Health Department determined that the screening would consist of collection of water samples from three (3) high priority water outlets (drinking fountains, kitchen/food preparation area faucets, etc.), regularly used by students and staff for drinking, as designated by Matrix personnel. Two (2) samples were collected at each outlet: a first draw (Primary) sample; and a Flush sample. The Primary samples were collected from outlets that had been inactive for a minimum of eight hours. The Flush samples were collected after the water was allowed to run for a minimum of thirty (30) seconds at each of the sample locations.

The drinking water samples were collected in 125 milliliter, wide-mouth sample containers, containing nitric acid (preservative). Each sample container was labeled utilizing a coding system that identified: the type of drinking outlet sampled, Drinking Water Fountain (DWF), Drinking Water Cooler (DWC), Kitchen Faucet (KF) etc.; and a (P) for primary samples and a (F) for flush samples.

The samples were transported under chain of custody to TriMatrix Laboratories, located at 5560 Corporate Exchange Court SE, Grand Rapids Michigan for MDEQ drinking water certified lead analysis, using analytical method EPA 200.8 rev 5.4.

As per the EPA's *3T's for Reducing Lead in Drinking Water in Schools, Revised Technical Guidance (October 2006)* analysis of the flush sample(s) was only performed if analysis of the first draw (Primary) sample(s) indicated lead and/or copper concentrations greater than the EPA established Maximum Contaminate Level (MCL).

## FINDINGS

Analytical results indicate that none of the samples analyzed were above the EPA recommended limits of 0.015 milligrams per liter (mg/L) for lead. The table below summarizes the analytical results for the samples submitted. The laboratory analytical reports and chain of custody are provided in Attachment A.

Sample Number	Total Lead (Drinking Water)	MCL
1-WC-P-Cath (Water Cooler @ Basement Elevator Lobby)	0.0011 mg/L	0.015 mg/L
1-WC-F-Cath (Water Cooler @ Basement Elevator Lobby)	NA	0.015 mg/L
2-WF-P-Cath (Water Faucet In Kitchen)	<0.0010 mg/L	0.015 mg/L
2-WF-F-Cath (Water Faucet in Kitchen)	NA	0.015 mg/L
3-WF-P-Cath (Water Faucet in Room T-9)	<0.0010 mg/L	0.015 mg/L
3-WF-F-Cath (Water Faucet in Room T-9)	NA	0.015 mg/L

Key: NA - Not Analyzed

mg/L- milligrams per liter /parts per million (ppm)



ENVIRONMENTAL • GEOTECHNICAL  
BUILDING SCIENCES • MATERIALS TESTING

46555 Humboldt Drive  
Novi, Michigan 48377  
Telephone 248-669-5140  
[www.atcgroupservices.com](http://www.atcgroupservices.com)

## LIMITATIONS

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

The drinking water screening proposed and conducted by ATC was devised in cooperation with Matrix, City of Detroit Health Department and utilizing the EPA's 3Ts for Reducing Lead in Drinking Water in Schools and may not meet all of the recommendations provided by the MDEQ "Guidance on Drinking Water Sampling for Lead and Copper at Schools and Daycares on Community Water Supplies" Version 2.0 - April 13, 2016. 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**

A handwritten signature in black ink, reading 'Martin H. Gamble'.

Martin Gamble  
Senior Project Manager

A handwritten signature in black ink, reading 'Robert C. Smith'.

Robert C. Smith  
Building Science Department Manager

## **APPENDIX A**

### **LABORATORY ANALYTICAL REPORT**

June 08, 2016

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

**Project: Matrix Human Services**

Dear Mr. Robert Smith,

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

<b>Work Order</b>	<b>Received</b>	<b>Description</b>
1605669	05/27/2016	Cathedral

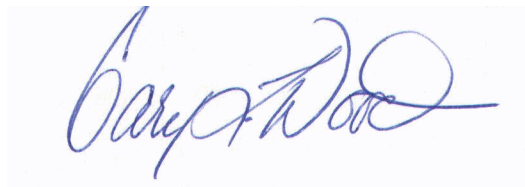
This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ANAB DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/13-049-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003329); Kentucky DEP (AL123065/#0021); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/53116); North Carolina DNRE (#659); Virginia DCLS (#460153/7952); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-14-00305).

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

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

Sincerely,



Gary L. Wood  
Project Chemist

**PROJECT TECHNICAL NARRATIVE(s)**

No Project Narrative is associated with this report.

**STATEMENT OF DATA QUALIFICATIONS**

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

## ANALYTICAL REPORT

Client: <b>ATC Group Services</b>	Work Order: <b>1605669</b>
Project: Matrix Human Services	Description: Cathedral
Client Sample ID: <b>1-WC-P-Cath water cooler@basement elevator lobby</b>	Sampled: 05/24/16 07:04
Lab Sample ID: <b>1605669-01</b>	Sampled By: ATC
Matrix: Drinking Water	Received: 05/27/16 16:45

### Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Lead	0.0011	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	06/07/16 10:45	DSC	1605652



## ANALYTICAL REPORT

Client: <b>ATC Group Services</b>	Work Order: <b>1605669</b>
Project: Matrix Human Services	Description: Cathedral
Client Sample ID: <b>2-WF-P-Cath water faucet in kitchen</b>	Sampled: 05/24/16 07:07
Lab Sample ID: <b>1605669-03</b>	Sampled By: ATC
Matrix: Drinking Water	Received: 05/27/16 16:45

### Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Lead	<0.0010	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	06/07/16 10:48	DSC	1605652

## ANALYTICAL REPORT

Client: **ATC Group Services**  
 Project: Matrix Human Services  
 Client Sample ID: **3-WF-P-Cath water faucet in room T-9**  
 Lab Sample ID: **1605669-05**  
 Matrix: Drinking Water

Work Order: **1605669**  
 Description: Cathedral  
 Sampled: 05/24/16 07:11  
 Sampled By: ATC  
 Received: 05/27/16 16:45

### Metals in Drinking Water by EPA 200 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Lead	<0.0010	0.0010	0.015	mg/L	1	USEPA-200.8 Rev. 5.4	06/07/16 10:51	DSC	1605652

**QUALITY CONTROL REPORT****Metals in Drinking Water by EPA 200 Series Methods**

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

QC Batch: 1605652 (Metals Direct Analysis)

Analyzed: 06/07/2016 By: DSC

Method Blank			<0.0010	mg/L					0.0010
Laboratory Control Sample		0.0400	<b>0.0386</b>	mg/L	96	85-115			0.0010

**PRETREATMENT SUMMARY PAGE**

Client: **ATC Group Services**  
Project: **Matrix Human Services**

<b>Pretreatment</b>	<b>Lab Sample ID</b>	<b>Batch</b>	<b>By</b>	<b>Date &amp; Time Prepared</b>
USEPA 600/R-94/173	1605669-01	1605652	LNS	06/02/16 08:15
	1605669-03	1605652	LNS	06/02/16 08:15
	1605669-05	1605652	LNS	06/02/16 08:15

For Lab Use Only

 5560 Corporate Exchange Court SE, Grand Rapids, MI 49512  
 Phone (616) 975-4500 Fax (616) 942-7463 www.trimatrixlabs.com

Analyses Requested

Pg. 1 of 1

Cart 13

VOA Rack/Tray

Receipt Log No. 4-23

Project Chemist Jim McFadden

Work Order No. 160538255


Client Name	ATC Group Services	Project Name	Matrix Human Services - Cathedral
Address	46555 Humboldt Drive, Ste 100	Client Project No. / P.O. No.	1888516284
City, State Zip	Novi MI 48377	Invoice To	<input checked="" type="checkbox"/> Client <input type="checkbox"/> Other (comments)
Phone:	248-669-5140	Fax	248-669-5147
Email	robert.smith@atcassociates.net	Contact/Report To	Robert Smith

B	Lead - Primary (P)									
B	Lead - Flush (F) - Hold									

☐ PRESERVATIVES  
 A NONE pH<7  
 B HNO<sub>3</sub> pH<2  
 C H<sub>2</sub>SO<sub>4</sub> pH<2  
 D 1+1 HCl pH<2  
 E NaOH pH>12  
 F ZnAc/NaOH pH>9  
 G MeOH  
 H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	C	O	D	A	B	Matrix	Number of Containers Submitted	Total	Sample Comments
01		01	1-WC-P-Cath water cooler @ basement elevator lobby	TM2531	5/24/16	704						X DW	X	1	
02		02	1-WC-F-Cath water cooler @ basement elevator lobby	TM2531	5/24/16	705						X DW	X	1	
01		03	2-WF-P-Cath water faucet in kitchen	TM2531	5/24/16	707						X DW	X	1	
02		04	2-WF-F-Cath water faucet in kitchen	TM2531	5/24/16	708						X DW	X	1	
01		05	3-WF-P-Cath water faucet in room T-9	TM2531	5/24/16	711						X DW	X	1	
02		06	3-WF-F-Cath water faucet in room T-9	TM2531	5/24/16	712						X DW	X	1	

Sampled By (print) Andrew Rausser	How Shipped? Tracking No.	Hand	Carrier	Comments If lead or copper is above detection limits, please analyze flush samples
Sample's Signature 				
Company				

1. Received By 	Date 5/26/16	Time 1700	2. Relinquished By R. Johnson	Date 5/27/16	Time 1445	3. Received for Lab By D. Harding	Date 5/27/16	Time 15



# SAMPLE RECEIVING / LOG-IN CHECKLIST



**TRIMATRIX**  
LABORATORIES

Client: <u>QTC GROUP</u>	Work Order #: <u>1605669</u>
Receipt Record Page/Line #: <u>4-23</u>	Project Chemist: <u>JDR</u> Sample #: <u>01-06</u>

Recorded by (initials/date): <u>DN 5/27/16</u>	<input checked="" type="checkbox"/> Cooler <input type="checkbox"/> Box <input type="checkbox"/> Other	Qty Received: <u>1</u>	Thermometer Used: <input checked="" type="checkbox"/> IR Gun (#202) <input type="checkbox"/> Digital Thermometer (#54) <input type="checkbox"/> Other (# <u>      </u> )	<input type="checkbox"/> See Additional Cooler Information Form
------------------------------------------------	--------------------------------------------------------------------------------------------------------------	------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time	
<u>772531</u>	<u>7839</u>							
Custody Seals: <input checked="" type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		Custody Seals: <input type="checkbox"/> None <input type="checkbox"/> Present / Intact <input type="checkbox"/> Present / Not Intact		
Coolant Type: <input 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 Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None		Coolant Type: <input type="checkbox"/> Loose Ice <input type="checkbox"/> Bagged Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None		
Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		
Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		Temp Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No		
If Present, Temperature Blank Location is:		If Present, Temperature Blank Location is:		If Present, Temperature Blank Location is:		If Present, Temperature Blank Location is:		
<input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		<input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		<input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		<input type="checkbox"/> Representative <input type="checkbox"/> Not Representative		
Observed °C	Correction Factor °C	Actual °C	Observed °C	Correction Factor °C	Actual °C	Observed °C	Correction Factor °C	
Temp Blank:			Temp Blank:			Temp Blank:		
Sample 1:	<u>25.7</u>	<u>0</u>	<u>25.7</u>	Sample 1:		Sample 1:		
Sample 2:	<u>24.6</u>	<u>0</u>	<u>24.6</u>	Sample 2:		Sample 2:		
Sample 3:	<u>24.4</u>	<u>0</u>	<u>24.4</u>	Sample 3:		Sample 3:		
3 Sample Average °C: <u>24.9</u>			3 Sample Average °C: <u>      </u>			3 Sample Average °C: <u>      </u>		
<input type="checkbox"/> Cooler ID on COC? <input type="checkbox"/> VOC Trip Blank received?			<input type="checkbox"/> Cooler ID on COC? <input type="checkbox"/> VOC Trip Blank received?			<input type="checkbox"/> Cooler ID on COC? <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	<input checked="" type="checkbox"/> Chain of Custody record(s)? If No, Initiated By <u>      </u> Received for Lab Signed/Date/Time? <u>      </u> <input type="checkbox"/> Shipping document? <input type="checkbox"/> Other <u>      </u>
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## COC Information

<input checked="" type="checkbox"/> TriMatrix COC <input type="checkbox"/> Other <u>      </u>	COC ID Numbers: <u>160538255</u>
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## Check Sample Preservation

N/A	Yes	No	<input type="checkbox"/> Temperature Blank OR average sample temperature, ≥6° C? If either is ≥6° C, was thermal preservation required? If "Yes", Project Chemist Approval Initials: <u>      </u> If "Yes" Completed Non Con Cooler - Cont Inventory Form? Completed Sample Preservation Verification Form? <input checked="" type="checkbox"/> Samples chemically preserved correctly? If "No", added orange tag? <input checked="" type="checkbox"/> Received pre-preserved VOC soils? <input type="checkbox"/> MeOH <input type="checkbox"/> Na <sub>2</sub> SO <sub>4</sub>
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## Check COC for Accuracy

Yes	No	<input type="checkbox"/> Analysis Requested? <input checked="" type="checkbox"/> Sample ID matches COC? <input checked="" type="checkbox"/> Sample Date and Time matches COC? Container type completed on COC? <input checked="" type="checkbox"/> All container types indicated are received?
-----	----	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Check for Short Hold-Time Prep/Analyses

<input type="checkbox"/> Bacteriological <input type="checkbox"/> Air Bags <input type="checkbox"/> EnCores / Methanol Pre-Preserved <input type="checkbox"/> Formaldehyde/Aldehyde <input type="checkbox"/> Green-tagged containers <input type="checkbox"/> Yellow/White-tagged 1 L ambers (SV Prep-Lab)	<div style="border: 1px solid black; padding: 5px;"> <b>AFTER HOURS ONLY:</b>          COPIES OF COC TO LAB AREA(S)  <input checked="" type="checkbox"/> NONE RECEIVED  <input type="checkbox"/> RECEIVED, COCs TO LAB(S)       </div>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Sample Condition Summary

N/A	Yes	No	<input checked="" type="checkbox"/> Broken containers/lids? <input checked="" type="checkbox"/> Missing or incomplete labels? <input checked="" type="checkbox"/> Illegible information on labels? <input checked="" type="checkbox"/> Low volume received? <input checked="" type="checkbox"/> Inappropriate or non-TriMatrix containers received? <input type="checkbox"/> VOC vials / TOX containers have headspace? <input type="checkbox"/> Extra sample locations / containers not listed on COC?
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## Notes

<input type="checkbox"/> Trip Blank received <input type="checkbox"/> Trip Blank not listed on COC	<input type="checkbox"/> Trip Blank received <input type="checkbox"/> Trip Blank not listed on COC
Cooler Received (Date/Time): <u>DN 5/27/16</u>	Paperwork Delivered (Date/Time): <u>5/27/16</u>
<input type="checkbox"/> ≤1 Hour Goal Met? Yes / No	



Client: <u>QTC</u>	Work Order #: <u>1605669</u>
Receipt Log #: <u>4-23</u>	Completed By (initials/date): <u>JN 5/27/14</u>
Project Chemist: <u>JDR</u>	

COC ID #: <u>160538255</u>				Adjusted by: _____ Date: _____				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	6	15						
Tag Color	Lt. Blue	Blue	Brown	Red	Red Stripe						
Preservative	NaOH	H <sub>2</sub> SO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HNO <sub>3</sub>						
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											

Comments

 pH Strip Reagent #  
☒ **6040263**  
☐

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

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

Comments

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