

OBG | There's a way

April 25, 2018

**Mr. Tom Hutchings**

City of Flint Water Pollution  
Water Pollution Control Facilities  
G4652 Beecher Rd.  
Flint, MI, 48532

RE: ***Discharge Permit Submittal- January 2018 through March 2018***

*Permit No.: 6-08-04-04-GML1*

FILE: 15388/68545/Docs

Dear **Mr. Hutchings**:

In accordance with requirements of the above referenced discharge permit, we are providing you with the following discharge information for the period January 1, 2018 to March 31, 2018 for the Coldwater Road Landfill facility, located at 6220 Horton Avenue, Flint, Michigan.

- Periodic Report on Continued Compliance, certification
- Periodic Report on Continued Compliance (Table 1)
- Daily Discharge Summary Table (Table 2)
- Analytical Reports provided by Merit Laboratories, Inc. for samples from the on-site, above ground collection tank collected on February 21, 2018.
- Copy of Chain-of-Custody forms.

The laboratory analytical results indicate concentrations were below the Sewer Use Permit limits for the parameters analyzed for the water discharged to the POTW during the discharge period.

Please call me at 313-333-0211 if you have any questions.

Very truly yours,

**O'BRIEN & GERE ENGINEERS, INC.**

Clifford S. Yantz  
Senior Hydrogeologist

cc: Mr. Kevin Forbes – Beecher Metropolitan District, Flint, MI  
Mr. Grant Trigger – RACER Trust  
Mr. David Favero – RACER Trust  
Mr. Kevin Schneider – O'Brien & Gere



# City of Flint Industrial Pretreatment Program

## Periodic Report on Continued Compliance

Company Name: RACER Trust, Coldwater Road  
Street Address: 6220 Horton Avenue, Flint, Michigan  
Permit Number: 6-08-04-04-GML1  
Outfall Number: 001

Reporting Period: January 1, 2018 through March 31, 2018

Average Volume of Daily Discharge (during reporting period): 2,202 gallons  
(Three One Day Events)

Complete the following:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name of Authorized Representative: Clifford Yantz

Title of Authorized Representative: Senior Hydrogeologist, O'Brien & Gere Engineers, Inc.  
As agent for the RACER Trust

Signature of Authorized Representative: Clifford Yantz, as agent to RACER Trust

Date Signed by Authorized Representative: 4/25/18

If required to implement a Toxic Organics Management Plan (TOMP), complete the following:

"Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last Periodic Report on Continued Compliance. I further certify that, this facility is implementing the toxic organic management plan submitted to the control authority."

Name of Authorized Representative: N/A

Title of Authorized Representative: N/A

Signature of Authorized Representative: N/A

Date Signed by Authorized Representative: N/A

**Table 1**  
**Periodic Report on Continued Compliance**  
**City of Flint Sewer User Self-Monitoring Report**  
**First Quarter - 2018**

<b>RACER Trust - Coldwater Road Landfill Facility</b> <b>Permit Number 6-08-04-04-GML1</b> <b>6220 Horton Avenue</b>						
<b>Analytical Parameter</b>	<b>Ammonia-N</b>	<b>BOD5</b>	<b>HEM</b>	<b>pH @ 25°C</b>	<b>Phosphorus</b>	<b>TSS</b>
<b>Units</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>SU</b>	<b>mg/L</b>	<b>mg/L</b>
<b>Sampling Frequency</b>	<b>Per Batch</b>	<b>Per Batch</b>	<b>Per Batch</b>	<b>Per Batch</b>	<b>Per Batch</b>	<b>Per Batch</b>
<b>Sampling Procedure</b>	<b>Grab sample</b>	<b>Grab sample</b>	<b>Grab sample</b>	<b>Grab sample</b>	<b>Grab sample</b>	<b>Grab sample</b>
<b>Daily Maximum Limit</b>	<b>110</b>	<b>1196</b>	<b>100</b>	<b>NA</b>	<b>14</b>	<b>570</b>
<b>Maximum Limit</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>10.5</b>	<b>NA</b>	<b>NA</b>
<b>Minimum Limit</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>6</b>	<b>NA</b>	<b>NA</b>
<b>Test Result</b>	<b>1.17</b>	<b>7.3</b>	<b>0</b>	<b>8.4</b>	<b>0.06</b>	<b>76</b>
<b>Test Method</b>	4500-NH3 D	10360	1664A	4500-H+ B	4500-PE	2540 D
<b>Test Date</b>	2/23/2018	2/26/2018	2/27/2018	2/21/2018	2/27/2018	2/21/2018
<b>Sample Date</b>	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018
<b>Sample Type</b>	wastewater	wastewater	wastewater	wastewater	wastewater	wastewater
<b>Test Result</b>						
<b>Test Method</b>						
<b>Test Date</b>						
<b>Sample Date</b>						
<b>Sample Type</b>						
<b>Test Result</b>						
<b>Test Method</b>						
<b>Test Date</b>						
<b>Sample Date</b>						
<b>Sample Type</b>						
<b>Average Daily Conc.</b>						
<b>No. of Samples</b>						
<b>Number of Limit Exceedances</b>						

**Table 1**  
**Periodic Report on Continued Compliance**  
**City of Flint Sewer User Self-Monitoring Report**  
**First Quarter - 2018**

<b>RACER Trust - Coldwater Road Landfill Facility</b> <b>Permit Number 6-08-04-04-GML1</b> <b>6220 Horton Avenue</b>							
Analytical Parameter	Arsenic	Chromium	Copper	Mercury	Nickel	Zinc	Cyanide, available
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sampling Frequency	Per Batch	Per Batch	Per Batch	Per Batch	Per Batch	Per Batch	Per Batch
Sampling Procedure	Grab sample	Grab sample	Grab sample	Grab sample	Grab sample	Grab sample	Grab sample
Daily Maximum Limit	0.051	1.273	1.797	0.000012	0.543	2.626	0.165
Maximum Limit	NA	NA	NA	NA	NA	NA	NA
Minimum Limit	NA	NA	NA	NA	NA	NA	NA
Test Result	0.009	0.180	0.888	0.0000	0.205	0.062	0.000
Test Method	200.8	200.8	200.8	245.1	200.8	200.8	1677
Test Date	2/22/2018	2/22/2018	2/22/2018	2/22/2018	2/22/2018	2/22/2018	2/23/2018
Sample Date	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018
Sample Type	wastewater	wastewater	wastewater	wastewater	wastewater	wastewater	wastewater
Test Result							
Test Method							
Test Date							
Sample Date							
Sample Type							
Test Result							
Test Method							
Test Date							
Sample Date							
Sample Type							
Average Daily Conc.							
No. of Samples							
Number of Limit Exceedances							

**Table 2**  
**Coldwater Road Landfill**  
**Daily Discharge Summary Table**  
**First Quarter - 2018**  
**6-08-04-04-GML1**

Date	Beginning Flow Meter Reading	End Flow Meter Reading	Gallons Discharged	Begin Time of Discharge	End Time of Discharge	Average Flow (gal/min)	Temperature at Discharge		pH
							(C)	(F)	
2/27/2018	546,534	546,534	180	10:30	10:43	13.8	11.0	51.8	8.40
3/20/2018	546,534	551,006	4,472	12:25	15:00	28.9	8.0	46.4	7.90
3/21/2018	551,006	552,961	1,955	9:20	10:35	26.1	8.0	46.4	7.80

**Total Discharge Volume (3 Days): 6,607**  
**Average Discharge Volume (3 Days): 2,202**

NOTES : On 2/27/2018 no liquids were discharged from the accumulation tank. Water from the containment sump was discharged. Water was from condensation from outside of the tank and piping due to sudden change in temperature/humidity and from city water meter leaking while on



# Analytical Laboratory Report

Report ID: S87780.01(01)  
Generated on 02/27/2018

## Report to

Attention: Clifford Yantz  
O'Brien & Gere Engineers, Inc.  
1203 Mallow St.  
Wolverine Lake, MI 48390

Phone: 248-477-5701 FAX:  
Email: Clifford.Yantz@obg.com

## Report produced by

Merit Laboratories, Inc.  
2680 East Lansing Drive  
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:  
John Lavery (johnlavery@meritlabs.com)  
Barbara Ball (bball@meritlabs.com)

## Report Summary

Lab Sample ID(s): S87780.01  
Project: 68345.001.130 RACER Coldwater Rd Landfill  
Collected Date: 02/21/2018  
Submitted Date/Time: 02/21/2018 13:35  
Sampled by: Clifford Yantz  
P.O. #: 11700139

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Maya Murshak  
Technical Director



# Analytical Laboratory Report

## General Report Notes

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Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (\*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

## Report Narrative

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There is no additional narrative for this analytical report



# Analytical Laboratory Report

## Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

## Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

## Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods





# Analytical Laboratory Report

## Method Summary

Method	Version
E1664A	EPA Method 1664 Revision A February 1999
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
HACH 10360	HACH 10360
OIA-1677	EPA Method OIA-1677
SM2540D	Standard Method 2540 D 20th Edition
SM2550B	Standard Method 2550 B 20th Edition
SM4500-H+ B	Standard Method 4500 H + B 20th Edition
SM4500-NH3 D	Standard Method 4500 NH3 D 20th Edition
SM4500-PE	Standard Method 4500 P E 20th Edition
SW3015A	SW 846 Method 3015A Revision 1 February 2007



# Analytical Laboratory Report

## Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S87780.01	01-PRCC-18	Wastewater	02/21/18 11:00



# Analytical Laboratory Report

Lab Sample ID: S87780.01

Sample Tag: 01-PRCC-18

Collected Date/Time: 02/21/2018 11:00

Matrix: Wastewater

COC Reference: 104820

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.4	IR
1	250ml Plastic	H2SO4	Yes	5.4	IR
1	125ml Amber	PbCO3/NaOH	Yes	5.4	IR
1	1L Amber	None	Yes	5.4	IR
1	32oz Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
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### Extraction / Prep.

Mercury Digestion	Completed			E245.1	02/22/18 11:20	JRH		
Metal Digestion	Completed			SW3015A	02/22/18 10:15	CCM		

### Inorganics

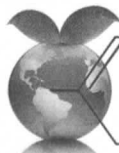
Ammonia-N (Undistilled)	1.17	mg/L	0.02	SM4500-NH3 D	02/23/18 13:48	MJC	7664-41-7	
Field pH*	8.4	STD Units	0.1	SM4500-H+ B	02/21/18 11:00	CY		
Field Temperature*	52	oF	1	SM2550B	02/21/18 11:00	CY		
Oil & Grease n-Hexane Extract.	Not detected	mg/L	2	E1664A	02/27/18 12:00	PLB		
TBOD5 - Set*	Completed	mg/L		HACH 10360	02/21/18 15:00	SCV		
TBOD5*	7.3	mg/L	3	HACH 10360	02/26/18 15:10	SCV		
Total Phosphorus	0.06	mg/L	0.01	SM4500-PE	02/27/18 13:31	MJC	7723-14-0	
Total Suspended Solids	76	mg/L	3	SM2540D	02/21/18 18:55	ASB		

### Metals

Arsenic	0.009	mg/L	0.002	E200.8	02/22/18 11:28	CCM	7440-38-2	
Chromium	0.180	mg/L	0.005	E200.8	02/22/18 11:28	CCM	7440-47-3	
Copper	0.888	mg/L	0.005	E200.8	02/22/18 11:28	CCM	7440-50-8	
Mercury	Not detected	mg/L	0.0002	E245.1	02/22/18 14:27	JRH	7439-97-6	
Nickel	0.205	mg/L	0.005	E200.8	02/22/18 11:28	CCM	7440-02-0	
Zinc	0.062	mg/L	0.005	E200.8	02/22/18 11:28	CCM	7440-66-6	

### Other / Misc.

Available Cyanide	Not detected	mg/L	0.002	OIA-1677	02/23/18 10:50	JDP	57-12-5	
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**Merit**  
Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823  
Phone (517) 332-0167 Fax (517) 332-4034  
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

104820

# REPORT TO

## CHAIN OF CUSTODY RECORD

# INVOICE TO

CONTACT NAME <b>Clifford Yantz</b>			
COMPANY <b>O'Brien &amp; Gere</b>			
ADDRESS <b>1203 mallow St.</b>			
CITY <b>Wolverine Lake</b>		STATE <b>MI</b>	ZIP CODE <b>48390</b>
PHONE NO. <b>3133330211</b>	FAX NO.	P.O. NO.	QUOTE NO.
E-MAIL ADDRESS <b>Clifford.yantz@obg.com</b>			

CONTACT NAME		<input type="checkbox"/> SAME	
COMPANY			
ADDRESS			
CITY		STATE	ZIP CODE
PHONE NO.		E-MAIL ADDRESS	

## ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME <b>68345-001030 RABERG Underhills</b>	SAMPLER(S) - PLEASE PRINT/SIGN NAME <b>Clifford Yantz / Cliff Yantz</b>
TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER	
DELIVERABLES REQUIRED <input checked="" type="checkbox"/> STD <input type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER	

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR	W=WASTE
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## # Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives							
	DATE	TIME				NONE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	MeOH	OTHER	
87780.01	2/21/18	11:00	01 - PREC - 18	WW	5	1	1	1	1				

*Total Metals*  
*Ammonia - Nitrogen*  
*Total Phosphorus*  
*FOG (Hex - Est.)*

Certifications	
<input type="checkbox"/> OHIO VAP	<input type="checkbox"/> Drinking Water
<input type="checkbox"/> DoD	<input type="checkbox"/> NPDES
Project Locations	
<input type="checkbox"/> Detroit	<input type="checkbox"/> New York
<input type="checkbox"/> Other	
Special Instructions	

*Metals are:*  
*As, Cr, Cu, Hg, Ni, Zn*

*Analysis per City of*  
*Flint - including*  
*QC report*

*Field pH: 8.4*  
*Field Temp: 11 °C*

*BOD/TSS in Amber*  
*Bottle*

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>Clifford Yantz</i>	<input checked="" type="checkbox"/> Sampler	DATE <b>2/21/18</b>	TIME <b>11:18</b>
RECEIVED BY: SIGNATURE/ORGANIZATION <i>Jim Miller</i>		DATE <b>2/21/18</b>	TIME <b>11:18</b>
RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>Jim Miller</i>		DATE <b>2/21/18</b>	TIME <b>13:32</b>
RECEIVED BY: SIGNATURE/ORGANIZATION <i>Jim Miller</i>		DATE <b>2/21/18</b>	TIME <b>13:35</b>

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS
NOTES:		TEMP. ON ARRIVAL
		<b>5.4</b>

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



## Quality Control Report

Report ID: QC-S87780-01

Generated on 03/06/2018

Report to

Attention: Clifford Yantz  
O'Brien & Gere Engineers, Inc.  
1203 Mallow St.  
Wolverine Lake, MI 48390

Phone: 248-477-5701 FAX:

Report Produced by

Merit Laboratories  
2680 East Lansing Drive  
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S87780.01  
Project: 68345.001.130 RACER Coldwater Rd Landfill  
Submitted Date/Time: 02/21/2018 13:35  
Sampled by: Clifford Yantz  
P.O. #: 11700139

QC Report Sections

Cover Page (Page 1)  
Analysis Summary (Page 2)  
Prep Batch Summary (Page 3)  
Batch QC Results (Pages 4-11)

Report Flag Descriptions

\*: QC result is outside of indicated control limits  
W: Surrogate result not applicable due to sample dilution

I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager and his/her designee, as verified by the following signature.

A handwritten signature in cursive script that reads "Barbara Ball".

Barbara Ball  
Quality Assurance Manager

## QC Report - Analysis Summary

**Lab Sample ID: S87780.01**

Sample Tag: 01-PRCC-18

Collected Date/Time: 02/21/2018 11:00

Matrix: Wastewater

COC Reference: 104820

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<b><i>Inorganics</i></b>						
Ammonia-N (Undistilled)	SM4500-NH3 D	02/23/18 13:48	AMN180223QC	AMN180223QC	No	BLK/LCS/MS/DUP
Oil & Grease n-Hexane Extract.	E1664A	02/27/18 12:00	OGHEX180227W01	OGHEX180227W01	No	BLK/LCS
Total Phosphorus	SM4500-PE	02/27/18 13:31	PHS180227QC	PHS180227QC	No	BLK/LCS/MS/DUP
Total Suspended Solids	SM2540D	02/21/18 18:55	TSS180221	TSS180221	No	BLK/LCS/DUP
<b><i>Metals</i></b>						
Arsenic	E200.8	02/22/18 11:28	MT4-18-0222A	MTD-022218-6	No	LCS/BLK/MS/MSD/DUP
Chromium	E200.8	02/22/18 11:28	MT4-18-0222A	MTD-022218-6	No	LCS/BLK/MS/MSD/DUP
Copper	E200.8	02/22/18 11:28	MT4-18-0222A	MTD-022218-6	No	LCS/BLK/MS/MSD/DUP
Mercury	E245.1	02/22/18 14:27	HG2-18-0222A	HGD-022218-1	No	LCS/BLK/MS/MSD
Nickel	E200.8	02/22/18 11:28	MT4-18-0222A	MTD-022218-6	No	LCS/BLK/MS/MSD/DUP
Zinc	E200.8	02/22/18 11:28	MT4-18-0222A	MTD-022218-6	No	LCS/BLK/MS/MSD/DUP
<b><i>Other / Misc.</i></b>						
Available Cyanide	OIA-1677	02/23/18 10:50	ACN180223-W1	ACN180223-W1	No	BLK/LCS/MS/MSD/DUP

## QC Report - Prep Batch Summary

### Inorganics, Prep Batch ID: AMN180223QC

Surrogates: No, QC Types: BLK/LCS/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S87780.01	Ammonia-N (Undistilled)	SM4500-NH3 D	02/23/18 13:48	AMN180223QC

### Inorganics, Prep Batch ID: OGHEX180227W01

Surrogates: No, QC Types: BLK/LCS

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S87780.01	Oil & Grease n-Hexane Extract.	E1664A	02/27/18 12:00	OGHEX180227W01

### Inorganics, Prep Batch ID: PHS180227QC

Surrogates: No, QC Types: BLK/LCS/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S87780.01	Total Phosphorus	SM4500-PE	02/27/18 13:31	PHS180227QC

### Inorganics, Prep Batch ID: TSS180221

Surrogates: No, QC Types: BLK/LCS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S87780.01	Total Suspended Solids	SM2540D	02/21/18 18:55	TSS180221

### Metals, Prep Batch ID: HGD-022218-1

Surrogates: No, QC Types: LCS/BLK/MS/MSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S87780.01	Mercury	E245.1	02/22/18 14:27	HG2-18-0222A

### Metals, Prep Batch ID: MTD-022218-6

Surrogates: No, QC Types: LCS/BLK/MS/MSD/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S87780.01	Arsenic	E200.8	02/22/18 11:28	MT4-18-0222A
S87780.01	Chromium	E200.8	02/22/18 11:28	MT4-18-0222A
S87780.01	Copper	E200.8	02/22/18 11:28	MT4-18-0222A
S87780.01	Nickel	E200.8	02/22/18 11:28	MT4-18-0222A
S87780.01	Zinc	E200.8	02/22/18 11:28	MT4-18-0222A

### Other / Misc., Prep Batch ID: ACN180223-W1

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S87780.01	Available Cyanide	OIA-1677	02/23/18 10:50	ACN180223-W1

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: AMN180223QC

Surrogates: No, QC Types: BLK/LCS/MS/DUP

#### Blank (BLK)

Lab Sample ID: AMN180223QC.LRB1

Run in Batch: AMN180223QC, Run Date: 02/23/2018 10:48, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Ammonia-N (Undistilled)		ND	0.02	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: AMN180223QC.LCS1

Run in Batch: AMN180223QC, Run Date: 02/23/2018 12:04, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Ammonia-N (Undistilled)		103	90	110

#### Matrix Spike (MS)

Lab Sample ID: AMN180223QC.MS1, Parent Sample ID: S87783.02

Run in Batch: AMN180223QC, Run Date: 02/23/2018 12:46, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Ammonia-N (Undistilled)		94	80	120

#### Matrix Spike (MS)

Lab Sample ID: AMN180223QC.MS2, Parent Sample ID: S87812.03

Run in Batch: AMN180223QC, Run Date: 02/23/2018 16:47, Prep Date: 02/23/2018, Matrix: Solid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Ammonia-N (Undistilled)		98	80	120

#### Duplicate (DUP)

Lab Sample ID: AMN180223QC.DP1, Parent Sample ID: S87783.01

Run in Batch: AMN180223QC, Run Date: 02/23/2018 12:33, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Ammonia-N (Undistilled)		3.8	20

#### Duplicate (DUP)

Lab Sample ID: AMN180223QC.DP2, Parent Sample ID: S87812.01

Run in Batch: AMN180223QC, Run Date: 02/23/2018 16:03, Prep Date: 02/23/2018, Matrix: Solid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Ammonia-N (Undistilled)		17.3	20



## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: OGHEx180227W01

Surrogates: No, QC Types: BLK/LCS

#### Blank (BLK)

Lab Sample ID: OGHEx180227W01.LRB1

Run in Batch: OGHEx180227W01, Run Date: 02/27/2018 12:00, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Oil & Grease n-Hexane Extract.		ND	1	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: OGHEx180227W01.LCS1

Run in Batch: OGHEx180227W01, Run Date: 02/27/2018 12:00, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Oil & Grease n-Hexane Extract.		98	78	114

#### Laboratory Control Sample (LCS)

Lab Sample ID: OGHEx180227W01.LCS2

Run in Batch: OGHEx180227W01, Run Date: 02/27/2018 12:00, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Oil & Grease n-Hexane Extract.		96	78	114

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: PHS180227QC

Surrogates: No, QC Types: BLK/LCS/MS/DUP

#### Blank (BLK)

Lab Sample ID: PHS180227QC.LRB1

Run in Batch: PHS180227QC, Run Date: 02/27/2018 12:38, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Phosphorus		ND	0.01	mg/L

#### Blank (BLK)

Lab Sample ID: PHS180227QC.LRB2

Run in Batch: PHS180227QC, Run Date: 02/27/2018 12:45, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Phosphorus		ND	0.01	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: PHS180227QC.LCS1

Run in Batch: PHS180227QC, Run Date: 02/27/2018 12:51, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Phosphorus		99	90	110

#### Matrix Spike (MS)

Lab Sample ID: PHS180227QC.MS1, Parent Sample ID: S87800.01

Run in Batch: PHS180227QC, Run Date: 02/27/2018 15:59, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Phosphorus		93	80	120

#### Duplicate (DUP)

Lab Sample ID: PHS180227QC.DP1, Parent Sample ID: S87810.01

Run in Batch: PHS180227QC, Run Date: 02/27/2018 15:56, Prep Date: 02/27/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Phosphorus		12.2	20

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: TSS180221

Surrogates: No, QC Types: BLK/LCS/DUP

#### Blank (BLK)

Lab Sample ID: TSS180221.LRB1

Run in Batch: TSS180221, Run Date: 02/21/2018 18:55, Prep Date: 02/21/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Suspended Solids		ND	3	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: TSS180221.LCS1

Run in Batch: TSS180221, Run Date: 02/21/2018 18:55, Prep Date: 02/21/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		100.6	82.2	111

#### Duplicate (DUP)

Lab Sample ID: TSS180221.DP1, Parent Sample ID: S87780.01

Run in Batch: TSS180221, Run Date: 02/21/2018 18:55, Prep Date: 02/21/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Suspended Solids		1.3	5

## QC Report - Batch QC Results

### Metals, Prep Batch ID: HGD-022218-1

Surrogates: No, QC Types: LCS/BLK/MS/MSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: HG2-18-0222A.018.LCS

Run in Batch: HG2-18-0222A, Run Date: 02/22/2018 13:42, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Mercury		99	85	115

#### Blank (BLK)

Lab Sample ID: HG2-18-0222A.019.LRB

Run in Batch: HG2-18-0222A, Run Date: 02/22/2018 13:44, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Mercury		ND	0.03	ug/L

#### Matrix Spike (MS)

Lab Sample ID: HG2-18-0222A.042.MS, Parent Sample ID: S87780.01

Run in Batch: HG2-18-0222A, Run Date: 02/22/2018 14:29, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Mercury		113	75	125

#### Matrix Spike (MS)

Lab Sample ID: HG2-18-0222A.046.MS, Parent Sample ID: S87780.01

Run in Batch: HG2-18-0222A, Run Date: 02/22/2018 14:43, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Mercury		99	75	125

#### Matrix Spike Duplicate (MSD)

Lab Sample ID: HG2-18-0222A.043.MSD, Parent Sample ID: HG2-18-0222A.042.MS

Run in Batch: HG2-18-0222A, Run Date: 02/22/2018 14:31, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Mercury	*	78	75	125	37	20

## QC Report - Batch QC Results

### Metals, Prep Batch ID: MTD-022218-6

Surrogates: No, QC Types: LCS/BLK/MS/MSD/DUP

#### Laboratory Control Sample (LCS)

Lab Sample ID: MT4-18-0222A.020.LCS

Run in Batch: MT4-18-0222A, Run Date: 02/22/2018 10:58, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Arsenic		100	85	115
Chromium		97	85	115
Copper		101	85	115
Nickel		96	85	115
Zinc		100	85	115

#### Blank (BLK)

Lab Sample ID: MT4-18-0222A.021.LRB

Run in Batch: MT4-18-0222A, Run Date: 02/22/2018 11:00, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Arsenic		ND	0.0004	mg/L
Chromium		ND	0.001	mg/L
Copper		ND	0.001	mg/L
Nickel		ND	0.001	mg/L
Zinc		ND	0.001	mg/L

#### Matrix Spike (MS)

Lab Sample ID: MT4-18-0222A.033.MS, Parent Sample ID: S87771.05

Run in Batch: MT4-18-0222A, Run Date: 02/22/2018 11:17, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Arsenic		107	75	125
Chromium		104	75	125
Copper		100	75	125
Nickel		101	75	125
Zinc		102	75	125

#### Matrix Spike (MS)

Lab Sample ID: MT4-18-0222A.041.MS, Parent Sample ID: S87780.01

Run in Batch: MT4-18-0222A, Run Date: 02/22/2018 11:31, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Arsenic		101	75	125
Chromium		101	75	125
Copper		97	75	125
Nickel		102	75	125
Zinc		96	75	125

#### Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-18-0222A.034.MSD, Parent Sample ID: MT4-18-0222A.033.MS

Run in Batch: MT4-18-0222A, Run Date: 02/22/2018 11:18, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Arsenic		103	75	125	3	20
Chromium		102	75	125	2	20
Copper		99	75	125	1	20
Nickel		103	75	125	2	20
Zinc		98	75	125	3	20

## QC Report - Batch QC Results

### Metals, Prep Batch ID: MTD-022218-6 (continued)

Surrogates: No, QC Types: LCS/BLK/MS/MSD/DUP

### Duplicate (DUP)

Lab Sample ID: MT4-18-0222A.040.DP, Parent Sample ID: S87780.01

Run in Batch: MT4-18-0222A, Run Date: 02/22/2018 11:29, Prep Date: 02/22/2018, Matrix: Liquid, Dilution: 5

Analyte	Flags	RPD	RPD CL
Arsenic		0	20
Chromium		2	20
Copper		5	20
Nickel		5	20
Zinc		6	20

## QC Report - Batch QC Results

### Other / Misc., Prep Batch ID: ACN180223-W1

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

#### Blank (BLK)

Lab Sample ID: ACN180223-W1.LRB1

Run in Batch: ACN180223-W1, Run Date: 02/23/2018 10:34, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Available Cyanide		ND	0.002	mg/L

#### Blank (BLK)

Lab Sample ID: ACN180223-W1.LRB2

Run in Batch: ACN180223-W1, Run Date: 02/23/2018 10:54, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Available Cyanide		ND	0.002	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: ACN180223-W1.LCS1

Run in Batch: ACN180223-W1, Run Date: 02/23/2018 10:38, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Available Cyanide		98	88	109

#### Matrix Spike (MS)

Lab Sample ID: ACN180223-W1.MS1, Parent Sample ID: S87741.01

Run in Batch: ACN180223-W1, Run Date: 02/23/2018 10:46, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Available Cyanide		98	82	130

#### Matrix Spike Duplicate (MSD)

Lab Sample ID: ACN180223-W1.MSD1, Parent Sample ID: ACN180223-W1.MS1

Run in Batch: ACN180223-W1, Run Date: 02/23/2018 10:48, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

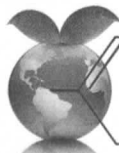
Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Available Cyanide		100	82	130	2	15

#### Duplicate (DUP)

Lab Sample ID: ACN180223-W1.DP1, Parent Sample ID: S87741.01

Run in Batch: ACN180223-W1, Run Date: 02/23/2018 10:44, Prep Date: 02/23/2018, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Available Cyanide		<1	15



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C.O.C. PAGE # 1 OF 1

104820

# REPORT TO

## CHAIN OF CUSTODY RECORD

# INVOICE TO

CONTACT NAME <b>Clifford Yantz</b>			
COMPANY <b>O'Brien &amp; Gere</b>			
ADDRESS <b>1203 mallow St.</b>			
CITY <b>Wolverine Lake</b>		STATE <b>MI</b>	ZIP CODE <b>48390</b>
PHONE NO. <b>3133330211</b>	FAX NO.	P.O. NO.	QUOTE NO.
E-MAIL ADDRESS <b>Clifford.yantz@obg.com</b>			

CONTACT NAME		<input type="checkbox"/> SAME	
COMPANY			
ADDRESS			
CITY		STATE	ZIP CODE
PHONE NO.	E-MAIL ADDRESS		

## ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME <b>68345-001030 RABERG Underhills</b>	SAMPLER(S) - PLEASE PRINT/SIGN NAME <b>Clifford Yantz / Clifford Yantz</b>
TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER	
DELIVERABLES REQUIRED <input checked="" type="checkbox"/> STD <input type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER	

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR	W=WASTE
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## # Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives							
	DATE	TIME				NONE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	MeOH	OTHER	
87780.01	2/21/18	11:00	01-PRCC-18	WW	5	1	1	1	1				

*Total Metals*  
*Ammonia - Nitrogen*  
*Total Phosphorus*  
*FOG (Hex - Est.)*

## Certifications

☐ OHIO VAP ☐ Drinking Water  
☐ DoD ☐ NPDES

## Project Locations

☐ Detroit ☐ New York  
☐ Other

## Special Instructions

*Metals are:*  
*As, Cr, Cu, Hg, Ni, Zn*

*Analysis per City of*  
*Flint - including*  
*QC report*

*Field pH: 8.4*  
*Field Temp: 11 °C*

*BOD/TSS in Amber*  
*Bottle*

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>Clifford Yantz</i>	<input checked="" type="checkbox"/> Sampler	DATE <b>2/21/18</b>	TIME <b>11:18</b>
RECEIVED BY: SIGNATURE/ORGANIZATION <i>Jim Miller</i>		DATE <b>2/21/18</b>	TIME <b>11:18</b>
RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>Jim Miller</i>		DATE <b>2/21/18</b>	TIME <b>13:32</b>
RECEIVED BY: SIGNATURE/ORGANIZATION <i>Jim Miller</i>		DATE <b>2/21/18</b>	TIME <b>13:35</b>

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS
NOTES:		TEMP. ON ARRIVAL
		<b>5.4</b>

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE