



May 4, 2018

City of New Buffalo- New Buffalo, MI  
224 W. Buffalo  
New Buffalo, MI 49117

Work Order No.: 18E0314

Re: CR6 Water Filtration Plant 300 Marx Dr

Dear Ken Anderson:

Microbac Laboratories, Inc. - Chicagoland Division received 2 sample(s) on 5/4/2018 11:45:00AM for the analyses presented in the following report as Work Order 18E0314.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at [ron.misiunas@microbac.com](mailto:ron.misiunas@microbac.com).

Sincerely,  
Microbac Laboratories, Inc.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala  
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | [www.microbac.com](http://www.microbac.com)



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**WORK ORDER SAMPLE SUMMARY****Date:** *Friday, May 4, 2018*

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**Client:** City of New Buffalo- New Buffalo, MI  
**Project:** CR6 Water Filtration Plant 300 Marx Dr  
**Lab Order:** 18E0314

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
18E0314-01	Chromium 6 - April 5-4-18-1		05/04/2018 08:20	5/4/2018 11:45:00AM
18E0314-02	Chromium 6 - April 5-4-18-2		05/04/2018 10:40	5/4/2018 11:45:00AM

Microbac Laboratories, Inc.

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## Analytical Results

Date: *Friday, May 4, 2018*

<b>Client:</b>	City of New Buffalo- New Buffalo, MI	<b>Work Order/ID:</b>	18E0314-01
<b>Client Project:</b>	CR6 Water Filtration Plant 300 Marx Dr	<b>Sampled:</b>	05/04/2018 8:20
<b>Client Sample ID:</b>	Chromium 6 - April 5-4-18-1	<b>Received:</b>	05/04/2018 11:45
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: <b>SW-846 7196A</b>			Analyst: <b>GRIEFF</b>			
<b>Hexavalent Chromium</b>		Prep Method: <b>SM 3500-Cr B-2009</b>			Prep Date/Time: <b>05/04/2018 12:06</b>			
Chromium, Hexavalent	dio	A	<b>ND</b>	0.010		mg/L	1	05/04/2018 14:50

## Analytical Results

Date: *Friday, May 4, 2018*

<b>Client:</b>	City of New Buffalo- New Buffalo, MI		
<b>Client Project:</b>	CR6 Water Filtration Plant 300 Marx Dr		
<b>Client Sample ID:</b>	Chromium 6 - April 5-4-18-2	<b>Work Order/ID:</b>	18E0314-02
<b>Sample Description:</b>		<b>Sampled:</b>	05/04/2018 10:40
<b>Matrix:</b>	Aqueous	<b>Received:</b>	05/04/2018 11:45

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: <b>SW-846 7196A</b>			Analyst: <b>GRIEFF</b>			
<b>Hexavalent Chromium</b>		Prep Method: <b>SM 3500-Cr B-2009</b>			Prep Date/Time: <b>05/04/2018 12:06</b>			
Chromium, Hexavalent	dio	A	<b>ND</b>	0.010		mg/L	1	05/04/2018 14:52

**FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**

B = Detected in the associated method Blank at a concentration above the routine RL  
b- = Detected in the associated method Blank at a concentration greater than 2.2 times the MDL  
b\* = Detected in the associated method Blank at a concentration greater than half the RL  
CFU = Colony forming units  
D = Dilution performed on sample  
DF = Dilution Factor  
g = Gram  
E = Value above quantitation range  
H = Analyte was prepared and/or analyzed outside of the analytical method holding time  
I = Matrix Interference  
J = Analyte concentration detected between RL and MDL (Metals / Organics)  
LOD = Limit of Detection  
LOQ = Limit of Quantitation  
m<sup>3</sup> = Meters cubed  
MDL = Method Detection Limit  
mg/Kg = Milligrams per Kilogram (ppm)  
mg/L = Milligrams per Liter (ppm)  
NA = Not Analyzed  
ND = Not Detected at the Reporting Limit (or the Method Detection Limit, if used)  
NR = Not Recovered  
R = RPD outside accepted recovery limits  
RL = Reporting Limit  
S = Spike recovery outside recovery limits  
Surr = Surrogate  
U = Undetected  
> = Greater than  
< = Less than  
% = Percent  
\* = Result exceeds project specific limits

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**ANALYTE TYPES: (AT)**

A,B = Target Analyte  
I = Internal Standard  
M = Summation Analyte  
S = Surrogate  
T = Tentatively Identified Compound (TIC, concentration estimated)

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**QC SAMPLE IDENTIFICATIONS**

BLK = Method Blank	ICSA = Interference Check Standard "A"
DUP = Method Duplicate	ICSAB = Interference Check Standard "AB"
BS = Method Blank Spike	BSD = Method Blank Spike Duplicate
MS = Matrix Spike	MSD = Matrix Spike Duplicate
ICB = Initial Calibration Blank	ICV = Initial Calibration Verification
CCB = Continuing Calibration Blank	CCV = Continuing Calibration Verification
CRL = Client Required Reporting Limit	OPR = Ongoing Precision and Recovery Standard
PDS = Post Digestion Spike	SD = Serial Dilution
QCS = Quality Control Standard	

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**CERTIFICATIONS (Certs)**

*Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.*

- <sup>d</sup> Illinois EPA drinking water, wastewater and solid waste analysis (#200064)
- <sup>i</sup> Kansas Dept Health & Env. NELAP (#E-10397)
- <sup>o</sup> Virginia Department of General Services Division of Consolidated Laboratory Services (#7990)



**COOLER INSPECTION**

**Date:** Friday, May 4, 2018  
**Client Name:** City of New Buffalo- New Buffalo, MI **Date/Time Received:** 05/04/2018 11:45  
**Work Order Number:** 18E0314 **Received by:** Nicole Rainwater  
**Checklist completed by:** 5/4/2018 12:02:00PM | Nicole Rainwater **Reviewed by:** 5/4/2018 | CAG  
**Carrier Name:** Client Delivered

**Cooler ID:** Default Cooler **Container/Temp Blank Temperature:** 20.9° C

After-Hour Arrival?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>		
Shipping container/cooler in good condition?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Not Present	<input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present	<input type="checkbox"/>
Custody seals intact on sample containers?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Present	<input checked="" type="checkbox"/>
COC present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC included sufficient client identification?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC included sufficient sample collector information?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC included a sample description?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC agrees with sample labels?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC identified the appropriate matrix?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC included date of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC included time of collection?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
COC identified the appropriate number of containers?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Samples in proper container/bottle?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Sample containers intact?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
All samples received within holding time?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
If the samples are preserved, are the preservatives identified?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		

If No, adjusted by? \_\_\_\_\_

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments: \_\_\_\_\_

**ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.**

Sample ID	Client Sample ID	Comments
18E0314-01	Chromium 6 - April 5-4-18-1	RUSH
18E0314-02	Chromium 6 - April 5-4-18-2	RUSH



9E0314 Carey Gadzala  
 City of New Buffalo - New Buffalo, MI  
 R6 water Filtration Plant 300 Marx Dr  
 5/04/2018

Chain of Custody Record

Samples  250 West 84th Drive  
 Submitted to: Merrillville, IN 46410  
 Tel: 219-769-8378  
 Fax: 219-769-1664

5713 West 85th Street  
 Indianapolis, IN 46278  
 Tel: 317-872-1375  
 Fax: 317-872-1379

Number 144048

Instructions on back

Project Chromium 6 Testing  
 Location Water Filtration Plant  
 PO # U-200  
 Compliance Monitoring?  Yes  No  
 Agency/Program ASAP (needed by)

Report Type  
 Results Only  
 Level III  
 Level IV  
 EDDD  
 Level II  
 Level III CLP-like  
 Level IV CLP-like

Turnaround Time  
 Routine (5 to 7 business days)  
 RUSH\* (notify lab)

Sampler Phone # 269-469-0381  
 Sampler Signature Jeffrey A Johnson  
 X e-mail (address) nbc.waterdept@comcast.net

rt via  Mail  Telephone  Fax (fax #)

\* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)  
 \* Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Client Sample ID	Matrix*	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analyses ↑ Preservative Types ** →	For Lab Use Only	
									Chromium 6	Chromium 6
Chromium 6 - MAY 4 - 18 - 1	SW	X			5-4-18	8:30am Eastern	1		X	18E0314
Chromium 6 - MAY 4 - 18 - 2	SW	X			5-4-18	10:40am Eastern	1		Y	02

Possible Hazard Identification  Hazardous  Non-Hazardous  Radioactive

Sample Disposition  Dispose as appropriate  Return  Archive

To be completed by Microbac  
 Temperature Upon Receipt (°C) 21.0-21.5-20.9  
 Samples Received on Ice?  Yes  No  
 Custody Seals Intact?  Yes  No

Relinquished By (signature) Jeffrey A Johnson  
 Relinquished By (signature) Rachel P. [Signature]  
 Relinquished By (signature) [Signature]

Received By (signature) [Signature]  
 Received By (signature) [Signature]  
 Received By (signature) [Signature]

Date/Time 5-4-18 / 11:45am  
 Date/Time 5-4-18 11:45am  
 Date/Time 5/4/18