From: Karen Dorow <kdorow@manitowoc.org>
Sent: Wednesday, August 12, 2020 6:13 PM
To: Beggs, Tauren R - DNR
Cc: GravelPit
Subject: June 2020 Potable Well Testing Letters
Attachments: 202008121749.pdf; 202008121748.pdf; drinkingwaterhealthadvisories_pfoa_pfos_updated_5.31.16.pdf

Hi Tauren,

Attached are copies of the letters and testing results sent out to property owners from the June 2020 potable well testing and a copy of the PFAS fact sheet that was sent with those tested for PFAS.

Please let me know if you have any questions.

Thanks!

Karen Dorow | Business Manager
City of Manitowoc
900 Quay Street
Manitowoc, WI 54220
Office (920) 686-6514
Mobile (920) 374-0404

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Mr. & Mrs. Edward G. Miller
3327 Hecker Road
Manitowoc, WI 54220

Dear Mr. & Mrs. Miller:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 3, 2020.

The City is in receipt of the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003D						**Sample Type** Water				
Sample ID 3327 HECKER RD						**Sample Date** 6/3/2020				
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	3.6	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003D						**Sample Type** Water				
Sample ID 3327 HECKER RD						**Sample Date** 6/3/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	112	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	96	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	95	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

Mr. Allen Braun
414 Magnolia Ave.
Manitowoc, WI 54220

COPY

RE: 3461(3417) Hecker Road

Dear Mr. Braun:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 3, 2020.

The City is in receipt of the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). According to state and federal guidelines you can continue using water with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003F							**Sample Type** Water			
Sample ID 3461 (3417) HECKE							**Sample Date** 6/3/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	1.66	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003F						**Sample Type** Water				
Sample ID 3461 (3417) HECKE						**Sample Date** 6/3/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	114	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	93	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

Mr. & Mrs. Richard Breunig
3720 Hecker Road
Manitowoc, WI 54220

COPY

RE: 3702 Hecker Road

Dear Richard & Cindy:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City is in receipt of the sample results for your property. The results indicate no presence of cis-1-2-Dichloroethene or vinyl chloride at or above drinking water standards. According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003K							**Sample Type** Water			
Sample ID 3702 HECKER RD							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003K						**Sample Type** Water				
Sample ID 3702 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	112	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Mr. & Mrs. Andrew Schroeder
4027 Thunder Ridge Road
Manitowoc, WI 54220

Dear Mr. & Mrs. Schroeder:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 3, 2020.

The City is in receipt of the sample results for your property. The results continue to indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). Since your well tested positive for vinyl chloride in a previous test, we ask that you continue to use the bottled water we have provided you for drinking and cooking. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003E							**Sample Type** Water			
Sample ID 4027 THUNDER RI							**Sample Date** 6/3/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	1.37	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003E						**Sample Type** Water				
Sample ID 4027 THUNDER RI						**Sample Date** 6/3/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	113	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	106	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Mr. & Mrs. Jeremy Maes
4101 Thunder Ridge Rd
Manitowoc, WI 54220

Dear Mr. & Mrs. Maes:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 3, 2020.

The City is in receipt of the sample results for your property. The results continue to indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003C							**Sample Type** Water			
Sample ID 4101 THUNDER RI							**Sample Date** 6/3/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	1.11 "J"	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003C						**Sample Type** Water				
Sample ID 4101 THUNDER RI						**Sample Date** 6/3/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	111	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	97	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Mr. Christopher Hanson
3921 Blackhawk Ct.
Manitowoc, WI 54220

Dear Mr. Hanson:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 10, 2020.

The City is in receipt of the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920)662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Project Name NEWTON **Invoice #** E38017
Project # 60135471

Lab Code 5038017E
Sample ID 3921 BLACKHAWK CT
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		6/18/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		6/18/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		6/18/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		6/18/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		6/18/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		6/18/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		6/18/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		6/18/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		6/18/2020	CJR	1
cis-1,2-Dichloroethene	0.78 "J"	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		6/18/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		6/18/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		6/18/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		6/18/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		6/18/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/18/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		6/18/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		6/18/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/18/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017E
Sample ID 3921 BLACKHAWK CT
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		6/18/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		6/18/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		6/18/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/18/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		6/18/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		6/18/2020	CJR	1
SUR - 4-Bromofluorobenzene	28.6	REC %			1	8260B		6/18/2020	CJR	1
SUR - Dibromofluoromethane	104	REC %			1	8260B		6/18/2020	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		6/18/2020	CJR	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Ms. Melissa Belyea
4024 CTH CR
Manitowoc, WI 54220

Dear Ms. Belyea:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City is in receipt of the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Liz Heinen (920) 993-7056
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178 or
  Annette Weissbach (920)662-5165
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003M							**Sample Type** Water			
Sample ID 4024 CTH CR							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	0.56 "J"	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003M						**Sample Type** Water				
Sample ID 4024 CTH CR						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	111	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

Ms. Brenda Birringer
3027 Orchard Lane
Manitowoc, WI 54220

COPY

Dear Ms. Birringer:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 3, 2020.

The City is in receipt of the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). The results also indicated the presence of vinyl chloride at or above detection limits. The City has provided bottled water from Kaat's Culligan and recommends you use the bottled water for both drinking and cooking. A copy of your laboratory analytical results is attached. We will contact you to schedule a confirmation sample.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003A						**Sample Type** Water				
Sample ID 3027 ORCHARD LN						**Sample Date** 6/3/2020				
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	0.6 "J"	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003A						**Sample Type** Water				
Sample ID 3027 ORCHARD LN						**Sample Date** 6/3/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	0.3 "J"	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	116	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	96	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	92	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Mr. Robert Love III
2201 Elm
Manitowoc, WI 54220

Dear Mr. Love:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City is in receipt of the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). The results also indicated no presence of vinyl chloride at or above detection limits. Since your well tested positive for vinyl chloride in a previous test, we ask that you continue to use the bottled water we have provided you for drinking and cooking. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003L						**Sample Type** Water				
Sample ID 2201 ELM STREET						**Sample Date** 6/4/2020				
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	0.44 "J"	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003L						**Sample Type** Water				
Sample ID 2201 ELM STREET						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	108	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Mrs. Anita Moore
3008 S. 26th St.
Manitowoc, WI 54220

Dear Mrs. Moore:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City is in receipt of the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l). The results also indicated the presence of vinyl chloride at or above detection limits. We recommend you continue to use the bottled water we have supplied you for drinking and cooking. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003N							**Sample Type** Water			
Sample ID 3008 S. 26TH ST							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	0.92 "J"	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003N						**Sample Type** Water				
Sample ID 3008 S. 26TH ST						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	0.3 "J"	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	112	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	99	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	94	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Ms. Kristen Prowls
3904 CTH CR
Manitowoc, WI 54220

Dear Ms. Prowls:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 10, 2020.

The City is in receipt of the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs). According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017G
Sample ID 3904 CTH CR
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		6/18/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		6/18/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		6/18/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		6/18/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		6/18/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		6/18/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		6/18/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		6/18/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		6/18/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		6/18/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		6/18/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		6/18/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		6/18/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		6/18/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/18/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		6/18/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		6/18/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/18/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017G
Sample ID 3904 CTH CR
Sample Matrix Water
Sample Date 6/10/2020

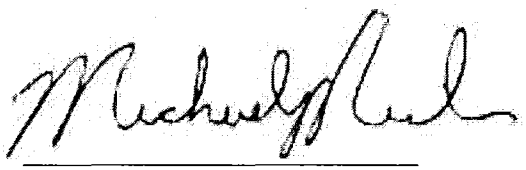
	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		6/18/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		6/18/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		6/18/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/18/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		6/18/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		6/18/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			1	8260B		6/18/2020	CJR	1
SUR - 4-Bromofluorobenzene	30.4	REC %			1	8260B		6/18/2020	CJR	1
SUR - Dibromofluoromethane	115	REC %			1	8260B		6/18/2020	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

July 15, 2020

COPY

Mr. Robert Urbanec
4314 Silver Creek Rd
Manitowoc, WI 54222

Dear Mr. Urbanec:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City is in receipt of the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs). According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003Q						**Sample Type** Water				
Sample ID 4314 SILVER CREE						**Sample Date** 6/4/2020				
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003Q						**Sample Type** Water				
Sample ID 4314 SILVER CREE						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	106	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	96	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CITY OF MANITOWOC

WISCONSIN, USA
www.manitowoc.org

July 15, 2020

COPY

Mr. Adam Rogne
4220 Silver Creek Rd
Manitowoc, WI 54220

Dear Mr. Rogne:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private shared well located at 4220 Silver Creek Road was included in the sampling that took place on June 10, 2020.

The City is in receipt of the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs). According to DNR guidelines the well water remains fit for consumption, and you can continue using it with no limitations. A copy of your laboratory analytical results is attached.

If you have any questions please feel free to call us or the WDNR contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 266-6677
  Wisconsin Department of Health Services
- General Questions: Kathleen McDaniel (920) 686-6990
  City of Manitowoc, City Attorney

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Cc: 4212 Silver Creek Road
4236 Silver Creek Road

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017D
Sample ID 4220 SILVER CR
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		6/18/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		6/18/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		6/18/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		6/18/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		6/18/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		6/18/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		6/18/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		6/18/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		6/18/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		6/18/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		6/18/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		6/18/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		6/18/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		6/18/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/18/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		6/18/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		6/18/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/18/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017D
Sample ID 4220 SILVER CR
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		6/18/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		6/18/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		6/18/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/18/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		6/18/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		6/18/2020	CJR	1
SUR - Dibromofluoromethane	109	REC %			1	8260B		6/18/2020	CJR	1
SUR - 4-Bromofluorobenzene	28.9	REC %			1	8260B		6/18/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		6/18/2020	CJR	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. Michael Rogers
3303 Hecker Road
Manitowoc, WI 54220

Dear Mr. Rogers:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate no detect of PFOA and the presence of PFOS at 1.65 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003O							**Sample Type** Water			
Sample ID 3303 HECKER RD							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003O						**Sample Type** Water				
Sample ID 3303 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	113	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 3303 Hecker — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 10:45

Laboratory Data

Lab Sample: 2001234-01
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.869	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFPeA	2706-90-3	ND	1.53	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFBS	375-73-5	ND	2.13	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
4:2 FTS	757124-72-4	ND	1.66	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFHxA	307-24-4	ND	2.60	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFPeS	2706-91-4	ND	2.88	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
HFPO-DA	13252-13-6	ND	5.74	5.96		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFHpA	375-85-9	ND	0.704	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
ADONA	919005-14-4	ND	0.860	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFHxS	355-46-4	ND	1.13	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
6:2 FTS	27619-97-2	ND	2.38	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFOA	335-67-1	ND	0.776	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFHpS	375-92-8	ND	1.12	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFNA	375-95-1	ND	0.965	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFOSA	754-91-6	2.37	2.11	4.77	J, Q	B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFOS	1763-23-1	1.65	0.962	4.77	J	B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
9Cl-PF3ONS	756426-58-1	ND	1.73	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFDA	335-76-2	ND	1.78	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
8:2 FTS	39108-34-4	ND	2.45	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFNS	68259-12-1	ND	4.61	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
MeFOSAA	2355-31-9	ND	1.97	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
EtFOSAA	2991-50-6	ND	1.63	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFUnA	2058-94-8	ND	1.25	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFDS	335-77-3	ND	1.47	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
11Cl-PF3OUdS	763051-92-9	ND	2.87	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
10:2 FTS	120226-60-0	ND	3.73	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFDoA	307-55-1	ND	0.944	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
MeFOSA	31506-32-8	ND	4.56	23.8		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFTrDA	72629-94-8	ND	0.589	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFDoS	79780-39-5	ND	4.97	5.96		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFTeDA	376-06-7	ND	0.900	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
EtFOSA	4151-50-2	ND	6.09	23.8		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFHxDA	67905-19-5	ND	0.350	4.77		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
PFODA	16517-11-6	ND	7.32	8.34		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
MeFOSE	24448-09-7	ND	7.23	23.8		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1
EtFOSE	1691-99-2	ND	11.2	23.8		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	78.9	25 - 150		B0F0096	29-Jun-20	0.105 L	29-Jun-20 23:26	1

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www.manitowoc.org

August 11, 2020

COPY

Mr. & Mrs. Charles Leiker
3114 Hecker Road
Manitowoc, WI 54220

Dear Mr. & Mrs. Leiker:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compoundsin drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 1.05 ng/l and no detect of PFOS. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

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www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003P						**Sample Type** Water				
Sample ID 3114 HECKER RD						**Sample Date** 6/4/2020				
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003P						**Sample Type** Water				
Sample ID 3114 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	111	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	95	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	105	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 3114 Hecker — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 11:15

Laboratory Data

Lab Sample: 2001234-02
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.835	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFPeA	2706-90-3	ND	1.47	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFBS	375-73-5	ND	2.05	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
4:2 FTS	757124-72-4	ND	1.59	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFHxA	307-24-4	ND	2.50	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFPeS	2706-91-4	ND	2.77	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
HFPO-DA	13252-13-6	ND	5.52	5.73		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFHpA	375-85-9	ND	0.677	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
ADONA	919005-14-4	ND	0.827	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFHxS	355-46-4	ND	1.09	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
6:2 FTS	27619-97-2	ND	2.29	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFOA	335-67-1	1.05	0.746	4.58	J	B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFHpS	375-92-8	ND	1.07	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFNA	375-95-1	ND	0.928	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFOSA	754-91-6	16.2	2.03	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFOS	1763-23-1	ND	0.925	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
9Cl-PF3ONS	756426-58-1	ND	1.66	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFDA	335-76-2	ND	1.71	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
8:2 FTS	39108-34-4	ND	2.36	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFNS	68259-12-1	ND	4.43	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
MeFOSAA	2355-31-9	ND	1.89	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
EtFOSAA	2991-50-6	ND	1.57	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFUnA	2058-94-8	ND	1.20	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFDS	335-77-3	ND	1.41	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
11Cl-PF3OUdS	763051-92-9	ND	2.76	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
10:2 FTS	120226-60-0	ND	3.59	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFDoA	307-55-1	ND	0.907	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
MeFOSA	31506-32-8	ND	4.39	22.9		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFTrDA	72629-94-8	ND	0.566	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFDoS	79780-39-5	ND	4.78	5.73		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFTeDA	376-06-7	ND	0.865	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
EtFOSA	4151-50-2	ND	5.85	22.9		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFHxDA	67905-19-5	ND	0.337	4.58		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
PFODA	16517-11-6	ND	7.03	8.02		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
MeFOSE	24448-09-7	ND	6.95	22.9		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1
EtFOSE	1691-99-2	ND	10.8	22.9		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	108	25 - 150		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:36	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

COPY

August 11, 2020

Mr. & Mrs. Dennis Vogel
3515 Hecker Road
Manitowoc, WI 54220

Dear Mr. & Mrs. Vogel:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate no detect of PFOA and the presence of PFOS at 1.10 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 50380031						**Sample Type** Water				
Sample ID 3515 HECKER RD						**Sample Date** 6/4/2020				
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003I						**Sample Type** Water				
Sample ID 3515 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	109	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	96	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 3515 Hecker — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 12:15

Laboratory Data

Lab Sample: 2001234-08
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.805	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFPeA	2706-90-3	ND	1.41	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFBS	375-73-5	ND	1.98	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
4:2 FTS	757124-72-4	ND	1.54	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFHxA	307-24-4	ND	2.41	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFPeS	2706-91-4	ND	2.67	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
HFPO-DA	13252-13-6	ND	5.32	5.52		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFHpA	375-85-9	ND	0.653	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
ADONA	919005-14-4	ND	0.798	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFHxS	355-46-4	ND	1.05	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
6:2 FTS	27619-97-2	ND	2.21	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFOA	335-67-1	ND	0.719	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFHpS	375-92-8	ND	1.04	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFNA	375-95-1	ND	0.895	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFOSA	754-91-6	3.61	1.96	4.42	J	B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFOS	1763-23-1	1.10	0.891	4.42	J	B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
9Cl-PF3ONS	756426-58-1	ND	1.60	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFDA	335-76-2	ND	1.65	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
8:2 FTS	39108-34-4	ND	2.28	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFNS	68259-12-1	ND	4.27	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
MeFOSAA	2355-31-9	ND	1.82	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
EtFOSAA	2991-50-6	ND	1.51	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFUnA	2058-94-8	ND	1.16	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFDS	335-77-3	ND	1.36	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
11Cl-PF3OUdS	763051-92-9	ND	2.66	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
10:2 FTS	120226-60-0	ND	3.46	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFDoA	307-55-1	ND	0.875	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
MeFOSA	31506-32-8	ND	4.23	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFTrDA	72629-94-8	ND	0.546	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFDoS	79780-39-5	ND	4.61	5.52		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFTeDA	376-06-7	ND	0.834	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
EtFOSA	4151-50-2	ND	5.64	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFHxDA	67905-19-5	ND	0.325	4.42		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
PFODA	16517-11-6	ND	6.78	7.73		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
MeFOSE	24448-09-7	ND	6.71	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1
EtFOSE	1691-99-2	ND	10.4	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	79.4	25 - 150		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:39	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. & Mrs. David Yanda
3911 Black Hawk Ct.
Manitowoc, WI 54220

Dear Mr. & Mrs. Yanda:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 10, 2020.

The City recently received the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 1.02 ng/l and no detect of PFOS. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Report Date *18-Jun-20*

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017A
Sample ID 3911 BLACKHAWK
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		6/17/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		6/17/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		6/17/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		6/17/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/17/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		6/17/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		6/17/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		6/17/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		6/17/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		6/17/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		6/17/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		6/17/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		6/17/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		6/17/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		6/17/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		6/17/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		6/17/2020	CJR	1
cis-1,2-Dichloroethene	0.53 "J"	ug/l	0.39	1.2	1	8260B		6/17/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		6/17/2020	CJR	1

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017A
Sample ID 3911 BLACKHAWK
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		6/17/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		6/17/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		6/17/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		6/17/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		6/17/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		6/17/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/17/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		6/17/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		6/17/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		6/17/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		6/17/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/17/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		6/17/2020	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		6/17/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		6/17/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		6/17/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		6/17/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/17/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		6/17/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		6/17/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		6/17/2020	CJR	1
SUR - 4-Bromofluorobenzene	29	REC %			1	8260B		6/17/2020	CJR	1
SUR - Dibromofluoromethane	106	REC %			1	8260B		6/17/2020	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		6/17/2020	CJR	1

Vista Analytical Laboratory

Sample ID: 3911 Blackhawk — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 10-Jun-20 09:15

Laboratory Data

Lab Sample: 2001266-01
Date Received: 12-Jun-20 09:55
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.817	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFPeA	2706-90-3	ND	1.43	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFBS	375-73-5	ND	2.01	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
4:2 FTS	757124-72-4	ND	1.56	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFHxA	307-24-4	ND	2.44	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFPeS	2706-91-4	ND	2.71	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
HFPO-DA	13252-13-6	ND	5.40	5.60		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFHpA	375-85-9	ND	0.662	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
ADONA	919005-14-4	ND	0.809	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFHxS	355-46-4	ND	1.06	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
6:2 FTS	27619-97-2	ND	2.24	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFOA	335-67-1	1.02	0.730	4.48	J, Q	B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFHpS	375-92-8	ND	1.05	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFNA	375-95-1	ND	0.908	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFOSA	754-91-6	4.51	1.98	4.48	Q	B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFOS	1763-23-1	ND	0.904	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
9Cl-PF3ONS	756426-58-1	ND	1.62	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFDA	335-76-2	ND	1.67	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
8:2 FTS	39108-34-4	ND	2.31	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFNS	68259-12-1	ND	4.34	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
MeFOSAA	2355-31-9	ND	1.85	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
EtFOSAA	2991-50-6	ND	1.54	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFUnA	2058-94-8	ND	1.18	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFDS	335-77-3	ND	1.38	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
11Cl-PF3OUdS	763051-92-9	ND	2.70	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
10:2 FTS	120226-60-0	ND	3.51	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFDoA	307-55-1	ND	0.888	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
MeFOSA	31506-32-8	ND	4.29	22.4		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFTrDA	72629-94-8	ND	0.554	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFDoS	79780-39-5	ND	4.67	5.60		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFTeDA	376-06-7	ND	0.846	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
EtFOSA	4151-50-2	ND	5.73	22.4		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFHxDA	67905-19-5	ND	0.329	4.48		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
PFODA	16517-11-6	ND	6.88	7.84		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
MeFOSE	24448-09-7	ND	6.80	22.4		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1
EtFOSE	1691-99-2	ND	10.6	22.4		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	133	25 - 150		B0F0094	17-Jun-20	0.112 L	20-Jun-20 21:43	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. & Mrs. William Gamble
4159 Silver Creek
Manitowoc, WI 54220

Dear Mr. & Mrs. Gamble:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 3, 2020.

The City recently received the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate no detect of PFOA and the presence of PFOS at 1.23 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003G							**Sample Type** Water			
Sample ID 4159 SILVER CR							**Sample Date** 6/3/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	0.78 "J"	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003G						**Sample Type** Water				
Sample ID 4159 SILVER CR						**Sample Date** 6/3/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	111	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	104	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	94	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 4159 Silver Cr — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 03-Jun-20 18:15

Laboratory Data

Lab Sample: 2001234-11
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.800	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFPeA	2706-90-3	ND	1.41	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFBS	375-73-5	ND	1.96	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
4:2 FTS	757124-72-4	ND	1.53	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFHxA	307-24-4	ND	2.39	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFPeS	2706-91-4	ND	2.66	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
HFPO-DA	13252-13-6	ND	5.29	5.49		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFHpA	375-85-9	ND	0.649	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
ADONA	919005-14-4	ND	0.793	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFHxS	355-46-4	ND	1.04	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
6:2 FTS	27619-97-2	ND	2.20	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFOA	335-67-1	ND	0.715	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFHpS	375-92-8	ND	1.03	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFNA	375-95-1	ND	0.889	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFOSA	754-91-6	ND	1.94	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFOS	1763-23-1	1.23	0.886	4.39	J	B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
9Cl-PF3ONS	756426-58-1	ND	1.59	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFDA	335-76-2	ND	1.64	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
8:2 FTS	39108-34-4	ND	2.26	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFNS	68259-12-1	ND	4.25	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
MeFOSAA	2355-31-9	ND	1.81	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
EtFOSAA	2991-50-6	ND	1.50	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFUnA	2058-94-8	ND	1.15	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFDS	335-77-3	ND	1.35	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
11Cl-PF3OUdS	763051-92-9	ND	2.65	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
10:2 FTS	120226-60-0	ND	3.44	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFDoA	307-55-1	ND	0.869	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
MeFOSA	31506-32-8	ND	4.20	22.0		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFTrDA	72629-94-8	ND	0.542	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFDoS	79780-39-5	ND	4.58	5.49		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFTeDA	376-06-7	ND	0.829	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
EtFOSA	4151-50-2	ND	5.61	22.0		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFHxDA	67905-19-5	ND	0.323	4.39		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
PFODA	16517-11-6	ND	6.74	7.68		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
MeFOSE	24448-09-7	ND	6.66	22.0		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1
EtFOSE	1691-99-2	ND	10.4	22.0		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	98.4	25 - 150		B0F0096	29-Jun-20	0.114 L	30-Jun-20 01:30	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Ms. Luann Yindra
3518 Hecker Road
Manitowoc, WI 54220

Dear Ms. Yindra:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate no detect of PFOA and the presence of PFOS at 1.11 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003S							**Sample Type** Water			
Sample ID 3518 HECKER RD							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003S						**Sample Type** Water				
Sample ID 3518 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	111	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	95	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 3518 Hecker — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 13:45

Laboratory Data

Lab Sample: 2001234-04
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.798	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFPeA	2706-90-3	ND	1.40	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFBS	375-73-5	ND	1.96	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
4:2 FTS	757124-72-4	ND	1.52	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFHxA	307-24-4	ND	2.39	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFPeS	2706-91-4	ND	2.65	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
HFPO-DA	13252-13-6	ND	5.28	5.47		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFHpA	375-85-9	ND	0.647	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
ADONA	919005-14-4	ND	0.790	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFHxS	355-46-4	ND	1.04	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
6:2 FTS	27619-97-2	ND	2.19	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFOA	335-67-1	ND	0.713	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFHpS	375-92-8	ND	1.03	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFNA	375-95-1	ND	0.887	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFOSA	754-91-6	4.42	1.94	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFOS	1763-23-1	1.11	0.884	4.38	J, Q	B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
9Cl-PF3ONS	756426-58-1	ND	1.59	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFDA	335-76-2	ND	1.63	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
8:2 FTS	39108-34-4	ND	2.26	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFNS	68259-12-1	ND	4.24	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
MeFOSAA	2355-31-9	ND	1.81	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
EtFOSAA	2991-50-6	ND	1.50	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFUnA	2058-94-8	ND	1.15	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFDS	335-77-3	ND	1.35	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
11Cl-PF3OUdS	763051-92-9	ND	2.64	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
10:2 FTS	120226-60-0	ND	3.43	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFDoA	307-55-1	ND	0.867	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
MeFOSA	31506-32-8	ND	4.19	21.9		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFTrDA	72629-94-8	ND	0.541	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFDoS	79780-39-5	ND	4.57	5.47		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFTeDA	376-06-7	ND	0.827	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
EtFOSA	4151-50-2	ND	5.59	21.9		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFHxDA	67905-19-5	ND	0.322	4.38		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
PFODA	16517-11-6	ND	6.72	7.66		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
MeFOSE	24448-09-7	ND	6.65	21.9		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1
EtFOSE	1691-99-2	ND	10.3	21.9		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	82.1	25 - 150		B0F0096	29-Jun-20	0.114 L	29-Jun-20 23:57	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

COPY

August 11, 2020

Newport Home - Manager
3609 Hecker Road
Manitowoc, WI 54220

Dear Program Manager:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at .885 ng/l and the presence of PFOS at 1.50 ng/l totaling 2.385 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Cc: ORP Real Estate Holdings
Attn: Dave Nagy
1746 Executive Drive
Oconomowoc, WI 53066

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003R							**Sample Type** Water			
Sample ID 3609 HECKER RD							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003R						**Sample Type** Water				
Sample ID 3609 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	105	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	99	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	97	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

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1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

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Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 3609 Hecker — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 13:15

Laboratory Data

Lab Sample: 2001234-03
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.838	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFPeA	2706-90-3	ND	1.47	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFBS	375-73-5	ND	2.06	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
4:2 FTS	757124-72-4	ND	1.60	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFHxA	307-24-4	ND	2.51	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFPeS	2706-91-4	ND	2.78	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
HFPO-DA	13252-13-6	ND	5.54	5.75		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFHpA	375-85-9	ND	0.680	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
ADONA	919005-14-4	ND	0.830	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFHxS	355-46-4	ND	1.09	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
6:2 FTS	27619-97-2	ND	2.30	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFOA	335-67-1	0.885	0.749	4.60	J, Q	B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFHpS	375-92-8	ND	1.08	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFNA	375-95-1	ND	0.931	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFOSA	754-91-6	7.23	2.04	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFOS	1763-23-1	1.50	0.928	4.60	J	B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
9Cl-PF3ONS	756426-58-1	ND	1.67	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFDA	335-76-2	ND	1.71	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
8:2 FTS	39108-34-4	ND	2.37	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFNS	68259-12-1	ND	4.45	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
MeFOSAA	2355-31-9	ND	1.90	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
EtFOSAA	2991-50-6	ND	1.58	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFUnA	2058-94-8	ND	1.21	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFDS	335-77-3	ND	1.41	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
11Cl-PF3OUdS	763051-92-9	ND	2.77	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
10:2 FTS	120226-60-0	ND	3.60	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFDoA	307-55-1	ND	0.911	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
MeFOSA	31506-32-8	ND	4.32	22.6		B0G0006	02-Jul-20	0.111 L	05-Jul-20 19:07	1
PFTrDA	72629-94-8	ND	0.568	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFDoS	79780-39-5	ND	4.80	5.75		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFTeDA	376-06-7	ND	0.868	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
EtFOSA	4151-50-2	ND	5.76	22.6		B0G0006	02-Jul-20	0.111 L	05-Jul-20 19:07	1
PFHxDA	67905-19-5	ND	0.338	4.60		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
PFODA	16517-11-6	ND	7.06	8.05		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
MeFOSE	24448-09-7	ND	6.98	23.0		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1
EtFOSE	1691-99-2	ND	10.9	23.0		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	87.3	25 - 150		B0F0096	29-Jun-20	0.109 L	29-Jun-20 23:47	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. Jason Kaderabek
3625 Hecker Road
Manitowoc, WI 54220

Dear Mr. Kaderabek:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate no detects of PFOA or PFOS. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003U							**Sample Type** Water			
Sample ID 3625 HECKER RD							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003U						**Sample Type** Water				
Sample ID 3625 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	113	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	106	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	93	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 3625 Hecker — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 16:45

Laboratory Data

Lab Sample: 2001234-06
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.795	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFPeA	2706-90-3	ND	1.40	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFBS	375-73-5	ND	1.95	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
4:2 FTS	757124-72-4	ND	1.52	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFHxA	307-24-4	ND	2.38	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFPeS	2706-91-4	ND	2.64	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
HFPO-DA	13252-13-6	ND	5.26	5.45		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFHpA	375-85-9	ND	0.645	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
ADONA	919005-14-4	ND	0.788	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFHxS	355-46-4	ND	1.03	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
6:2 FTS	27619-97-2	ND	2.18	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFOA	335-67-1	ND	0.710	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFHpS	375-92-8	ND	1.02	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFNA	375-95-1	ND	0.884	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFOSA	754-91-6	9.72	1.93	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFOS	1763-23-1	ND	0.880	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
9Cl-PF3ONS	756426-58-1	ND	1.58	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFDA	335-76-2	ND	1.63	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
8:2 FTS	39108-34-4	ND	2.25	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFNS	68259-12-1	ND	4.22	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
MeFOSAA	2355-31-9	ND	1.80	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
EtFOSAA	2991-50-6	ND	1.49	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFUnA	2058-94-8	ND	1.15	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFDS	335-77-3	ND	1.34	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
11Cl-PF3OUdS	763051-92-9	ND	2.63	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
10:2 FTS	120226-60-0	ND	3.41	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFDoA	307-55-1	ND	0.864	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
MeFOSA	31506-32-8	ND	4.26	22.3		B0G0006	02-Jul-20	0.112 L	05-Jul-20 19:28	1
PFTrDA	72629-94-8	ND	0.539	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFDoS	79780-39-5	ND	4.55	5.45		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFTeDA	376-06-7	ND	0.824	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
EtFOSA	4151-50-2	ND	5.69	22.3		B0G0006	02-Jul-20	0.112 L	05-Jul-20 19:28	1
PFHxDA	67905-19-5	ND	0.321	4.36		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
PFODA	16517-11-6	ND	6.70	7.64		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
MeFOSE	24448-09-7	ND	6.62	21.8		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1
EtFOSE	1691-99-2	ND	10.3	21.8		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	92.3	25 - 150		B0F0096	29-Jun-20	0.115 L	30-Jun-20 00:18	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

COPY

August 11, 2020

Mr. & Mrs. Richard Breunig
3720 Hecker Road
Manitowoc, WI 54220

Dear Mr. & Mrs. Breunig:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 2.23 ng/l and no detect of PFOS. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003J							**Sample Type** Water			
Sample ID 3720 HECKER RD							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003J						**Sample Type** Water				
Sample ID 3720 HECKER RD						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	113	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	99	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	100	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE. WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

Vista Analytical Laboratory

Sample ID: 3720 Hecker — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 12:45

Laboratory Data

Lab Sample: 2001234-09
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.793	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFPeA	2706-90-3	ND	1.39	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFBS	375-73-5	ND	1.95	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
4:2 FTS	757124-72-4	ND	1.51	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFHxA	307-24-4	ND	2.37	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFPeS	2706-91-4	ND	2.63	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
HFPO-DA	13252-13-6	ND	5.25	5.44		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFHpA	375-85-9	ND	0.643	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
ADONA	919005-14-4	ND	0.786	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFHxS	355-46-4	ND	1.03	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
6:2 FTS	27619-97-2	ND	2.18	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFOA	335-67-1	2.23	0.709	4.35	J	B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFHpS	375-92-8	ND	1.02	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFNA	375-95-1	ND	0.882	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFOSA	754-91-6	42.4	1.93	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFOS	1763-23-1	ND	0.878	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
9Cl-PF3ONS	756426-58-1	ND	1.58	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFDA	335-76-2	ND	1.62	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
8:2 FTS	39108-34-4	ND	2.24	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFNS	68259-12-1	ND	4.21	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
MeFOSAA	2355-31-9	ND	1.80	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
EtFOSAA	2991-50-6	ND	1.49	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFUnA	2058-94-8	ND	1.14	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFDS	335-77-3	ND	1.34	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
11Cl-PF3OUdS	763051-92-9	ND	2.62	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
10:2 FTS	120226-60-0	ND	3.41	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFDoA	307-55-1	ND	0.862	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
MeFOSA	31506-32-8	ND	4.17	21.8		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFTrDA	72629-94-8	ND	0.538	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFDoS	79780-39-5	ND	4.54	5.44		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFTeDA	376-06-7	ND	0.822	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
EtFOSA	4151-50-2	ND	5.56	21.8		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFHxDA	67905-19-5	ND	0.320	4.35		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
PFODA	16517-11-6	ND	6.68	7.62		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
MeFOSE	24448-09-7	ND	6.61	21.8		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1
EtFOSE	1691-99-2	ND	10.3	21.8		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	96.7	25 - 150		B0F0096	29-Jun-20	0.115 L	30-Jun-20 01:10	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

Mr. & Mrs. Phillip Saari
4219 Viebahn
Manitowoc, WI 54220

Dear Mr. & Mrs. Saari:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 10, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 6.75 ng/l and no detect of PFOS. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Project Name NEWTON **Invoice #** E38017
Project # 60135471

Lab Code 5038017F
Sample ID 4219 VIEBAHN
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		6/18/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		6/18/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		6/18/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		6/18/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		6/18/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		6/18/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		6/18/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		6/18/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		6/18/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		6/18/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		6/18/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		6/18/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		6/18/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		6/18/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		6/18/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		6/18/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		6/18/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/18/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		6/18/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		6/18/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		6/18/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		6/18/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		6/18/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/18/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		6/18/2020	CJR	1

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017F
Sample ID 4219 VIEBAHN
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		6/18/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		6/18/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		6/18/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/18/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		6/18/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		6/18/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/18/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/18/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		6/18/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		6/18/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		6/18/2020	CJR	1
SUR - 4-Bromofluorobenzene	28.7	REC %			1	8260B		6/18/2020	CJR	1
SUR - Dibromofluoromethane	108	REC %			1	8260B		6/18/2020	CJR	1
SUR - Toluene-d8	104	REC %			1	8260B		6/18/2020	CJR	1

Vista Analytical Laboratory

Sample ID: 4219 Viebahn — **PFAS Isotope Dilution Method**

Client Data
Name: AECOM
Project: 60135471

Matrix: Aqueous
Date Collected: 10-Jun-20 16:45

Laboratory Data
Lab Sample: 2001266-04
Date Received: 12-Jun-20 09:55

Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.824	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFPeA	2706-90-3	ND	1.45	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFBS	375-73-5	ND	2.02	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
4:2 FTS	757124-72-4	ND	1.57	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFHxA	307-24-4	ND	2.46	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFPeS	2706-91-4	ND	2.73	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
HFPO-DA	13252-13-6	ND	5.45	5.65		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFHpA	375-85-9	ND	0.668	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
ADONA	919005-14-4	ND	0.816	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFHxS	355-46-4	ND	1.07	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
6:2 FTS	27619-97-2	ND	2.26	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFOA	335-67-1	6.75	0.735	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFHpS	375-92-8	ND	1.06	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFNA	375-95-1	ND	0.915	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFOSA	754-91-6	78.1	2.00	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFOS	1763-23-1	ND	0.912	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
9Cl-PF3ONS	756426-58-1	ND	1.64	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFDA	335-76-2	ND	1.68	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
8:2 FTS	39108-34-4	ND	2.33	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFNS	68259-12-1	ND	4.37	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
MeFOSAA	2355-31-9	ND	1.86	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
EtFOSAA	2991-50-6	ND	1.55	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFUnA	2058-94-8	ND	1.19	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFDS	335-77-3	ND	1.39	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
11Cl-PF3OUdS	763051-92-9	ND	2.72	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
10:2 FTS	120226-60-0	ND	3.54	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFDoA	307-55-1	ND	0.895	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
MeFOSA	31506-32-8	ND	4.33	22.6		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFTrDA	72629-94-8	ND	0.558	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFDoS	79780-39-5	ND	4.71	5.65		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFTeDA	376-06-7	ND	0.853	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
EtFOSA	4151-50-2	ND	5.77	22.6		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFHxDA	67905-19-5	ND	0.332	4.52		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
PFODA	16517-11-6	ND	6.94	7.91		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
MeFOSE	24448-09-7	ND	6.86	22.6		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1
EtFOSE	1691-99-2	ND	10.7	22.6		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	147	25 - 150		B0F0094	17-Jun-20	0.111 L	20-Jun-20 22:46	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. & Mrs. Michael O'Rourke
4127 Thunder Ridge Rd.
Manitowoc, WI 54220

Dear Mr. & Mrs. O'Rourke:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 3, 2020.

The City recently received the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 1.10 ng/l and no detect of PFOS. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003B							**Sample Type** Water			
Sample ID 4127 THUNDER RI							**Sample Date** 6/3/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	0.58 "J"	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	<.0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003B						**Sample Type** Water				
Sample ID 4127 THUNDER RI						**Sample Date** 6/3/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	112	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	96	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
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Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 4127 Thunder Ridge — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 03-Jun-20 14:15

Laboratory Data

Lab Sample: 2001234-10
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.845	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFPeA	2706-90-3	ND	1.48	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFBS	375-73-5	ND	2.08	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
4:2 FTS	757124-72-4	ND	1.61	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFHxA	307-24-4	ND	2.53	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFPeS	2706-91-4	ND	2.81	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
HFPO-DA	13252-13-6	ND	5.59	5.80		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFHpA	375-85-9	ND	0.685	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
ADONA	919005-14-4	ND	0.837	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFHxS	355-46-4	ND	1.10	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
6:2 FTS	27619-97-2	ND	2.32	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFOA	335-67-1	1.10	0.755	4.64	J	B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFHpS	375-92-8	ND	1.09	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFNA	375-95-1	ND	0.939	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFOSA	754-91-6	15.9	2.05	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFOS	1763-23-1	ND	0.936	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
9Cl-PF3ONS	756426-58-1	ND	1.68	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFDA	335-76-2	ND	1.73	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
8:2 FTS	39108-34-4	ND	2.39	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFNS	68259-12-1	ND	4.49	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
MeFOSAA	2355-31-9	ND	1.91	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
EtFOSAA	2991-50-6	ND	1.59	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFUnA	2058-94-8	ND	1.22	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFDS	335-77-3	ND	1.43	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
11Cl-PF3OUdS	763051-92-9	ND	2.79	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
10:2 FTS	120226-60-0	ND	3.63	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFDoA	307-55-1	ND	0.918	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
MeFOSA	31506-32-8	ND	4.44	23.2		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFTrDA	72629-94-8	ND	0.573	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFDoS	79780-39-5	ND	4.83	5.80		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFTeDA	376-06-7	ND	0.875	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
EtFOSA	4151-50-2	ND	5.92	23.2		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFHxDA	67905-19-5	ND	0.341	4.64		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
PFODA	16517-11-6	ND	7.12	8.12		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
MeFOSE	24448-09-7	ND	7.04	23.2		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1
EtFOSE	1691-99-2	ND	10.9	23.2		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	78.9	25 - 150		B0F0096	29-Jun-20	0.108 L	30-Jun-20 01:20	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. & Mrs. Jerry Haupt
2717 CTH CR / 4141 Viebahn
Manitowoc, WI 54220

Dear Mr. & Mrs. Haupt:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results continue to indicate the presence of VOC's above Enforcement Standards. The results also show the presence of cis-1,2-dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l) and vinyl chloride above the drinking water standard of .20 micrograms per liter (ug/l). This well is for your landscape business only to be used for watering purposes and all faucets must be marked as non-potable.

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 2.13 ng/l and the presence of PFOS at 2.17 ng/l totaling 4.3 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS

CITY OF MANITOWOC

WISCONSIN, USA

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in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003H						**Sample Type** Water				
Sample ID 4141 VIEBAHN						**Sample Date** 6/4/2020				
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/9/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/9/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/9/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/9/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/9/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/9/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/9/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/9/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/9/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/9/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/9/2020	8260B	CJR	1
cis-1,2-Dichloroethene	1.72	ug/l	0.39	1.2	1		6/9/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/9/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/9/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/9/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/9/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003H						**Sample Type**	Water			
Sample ID 4141 VIEBAHN						**Sample Date**	6/4/2020			
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/9/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/9/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/9/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/9/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/9/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/9/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/9/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/9/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/9/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/9/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/9/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/9/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/9/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/9/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/9/2020	8260B	CJR	1
Vinyl Chloride	0.54 "J"	ug/l	0.2	0.65	1		6/9/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/9/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/9/2020	8260B	CJR	1
SUR - Dibromofluoromethane	111	REC %			1		6/9/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1		6/9/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	105	REC %			1		6/9/2020	8260B	CJR	1
SUR - Toluene-d8	96	REC %			1		6/9/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

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1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

Vista Analytical Laboratory

Sample ID: 4141 Viebahn **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471

Matrix: Aqueous
Date Collected: 04-Jun-20 09:30

Laboratory Data

Lab Sample: 2001234-07
Date Received: 09-Jun-20 10:00

Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.804	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFPeA	2706-90-3	ND	1.41	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFBS	375-73-5	ND	1.98	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
4:2 FTS	757124-72-4	ND	1.53	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFHxA	307-24-4	ND	2.41	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFPeS	2706-91-4	ND	2.67	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
HFPO-DA	13252-13-6	ND	5.32	5.52		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFHpA	375-85-9	ND	0.652	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
ADONA	919005-14-4	ND	0.797	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFHxS	355-46-4	ND	1.05	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
6:2 FTS	27619-97-2	ND	2.21	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFOA	335-67-1	2.13	0.718	4.41	J	B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFHpS	375-92-8	ND	1.03	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFNA	375-95-1	ND	0.894	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFOSA	754-91-6	33.2	1.95	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFOS	1763-23-1	2.17	0.891	4.41	J, Q	B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
9Cl-PF3ONS	756426-58-1	ND	1.60	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFDA	335-76-2	ND	1.64	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
8:2 FTS	39108-34-4	ND	2.27	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFNS	68259-12-1	ND	4.27	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
MeFOSAA	2355-31-9	ND	1.82	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
EtFOSAA	2991-50-6	ND	1.51	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFUnA	2058-94-8	ND	1.16	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFDS	335-77-3	ND	1.36	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
11Cl-PF3OUdS	763051-92-9	ND	2.66	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
10:2 FTS	120226-60-0	ND	3.45	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFDoA	307-55-1	ND	0.874	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
MeFOSA	31506-32-8	ND	4.23	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFTrDA	72629-94-8	ND	0.545	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFDoS	79780-39-5	ND	4.60	5.52		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFTeDA	376-06-7	ND	0.833	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
EtFOSA	4151-50-2	ND	5.64	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFHxDA	67905-19-5	ND	0.324	4.41		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
PFODA	16517-11-6	ND	6.78	7.72		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
MeFOSE	24448-09-7	ND	6.70	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1
EtFOSE	1691-99-2	ND	10.4	22.1		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	98.0	25 - 150		B0F0096	29-Jun-20	0.113 L	30-Jun-20 00:28	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. Brian Maurer
3817 Viebahn
Manitowoc, WI 54220

Dear Mr. Maurer:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 4, 2020.

The City recently received the sample results for your property. The results indicate the presence of cis-1-2-Dichloroethene, detected by the laboratory at levels below the drinking water standard of 70 micrograms per liter (ug/l).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 1.81 ng/l and the presence of PFOS at 1.85 ng/l totaling 3.66 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

Since your well tested positive for vinyl chloride in a previous test, we ask that you continue to use the bottled water we have provided you for drinking and cooking. A copy of your VOC and PFAS laboratory analytical results are attached.

If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003T							**Sample Type** Water			
Sample ID 3817 VIEBAHN ST							**Sample Date** 6/4/2020			
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1		6/10/2020	8260B	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1		6/10/2020	8260B	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1		6/10/2020	8260B	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1		6/10/2020	8260B	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1		6/10/2020	8260B	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1		6/10/2020	8260B	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1		6/10/2020	8260B	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1		6/10/2020	8260B	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1		6/10/2020	8260B	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1		6/10/2020	8260B	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1		6/10/2020	8260B	CJR	1
cis-1,2-Dichloroethene	0.48 "J"	ug/l	0.39	1.2	1		6/10/2020	8260B	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1		6/10/2020	8260B	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1		6/10/2020	8260B	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1		6/10/2020	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1		6/10/2020	8260B	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code
Lab Code 5038003T						**Sample Type** Water				
Sample ID 3817 VIEBAHN ST						**Sample Date** 6/4/2020				
Isopropylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1		6/10/2020	8260B	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1		6/10/2020	8260B	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1		6/10/2020	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1		6/10/2020	8260B	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1		6/10/2020	8260B	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1		6/10/2020	8260B	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1		6/10/2020	8260B	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1		6/10/2020	8260B	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1		6/10/2020	8260B	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1		6/10/2020	8260B	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1		6/10/2020	8260B	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1		6/10/2020	8260B	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1		6/10/2020	8260B	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1		6/10/2020	8260B	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1		6/10/2020	8260B	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1		6/10/2020	8260B	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1		6/10/2020	8260B	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1		6/10/2020	8260B	CJR	1
SUR - Dibromofluoromethane	110	REC %			1		6/10/2020	8260B	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			1		6/10/2020	8260B	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1		6/10/2020	8260B	CJR	1
SUR - Toluene-d8	94	REC %			1		6/10/2020	8260B	CJR	1

Synergy Environmental Lab, INC.

DAVE HENDERSON
AECOM
1555 N RIVERCENTER DRIVE
MILWAUKEE, WI 53212

Project # 60135471
Project Name NEWTON GP
Invoice # E38003

Report Date *15-Jun-20*

Analyte	Result	Units	LOD	LOQ	Dil	Ext Date	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature _____

Vista Analytical Laboratory

Sample ID: 3817 Viebahn — **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 04-Jun-20 14:45

Laboratory Data

Lab Sample: 2001234-05
Date Received: 09-Jun-20 10:00
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.826	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFPeA	2706-90-3	ND	1.45	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFBS	375-73-5	ND	2.03	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
4:2 FTS	757124-72-4	ND	1.57	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFHxA	307-24-4	ND	2.47	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFPeS	2706-91-4	ND	2.74	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
HFPO-DA	13252-13-6	ND	5.46	5.66		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFHpA	375-85-9	ND	0.669	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
ADONA	919005-14-4	ND	0.818	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFHxS	355-46-4	ND	1.07	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
6:2 FTS	27619-97-2	ND	2.27	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFOA	335-67-1	1.81	0.737	4.53	J	B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFHpS	375-92-8	ND	1.06	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFNA	375-95-1	ND	0.917	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFOSA	754-91-6	26.6	2.00	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFOS	1763-23-1	1.85	0.914	4.53	J	B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
9Cl-PF3ONS	756426-58-1	ND	1.64	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFDA	335-76-2	ND	1.69	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
8:2 FTS	39108-34-4	ND	2.33	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFNS	68259-12-1	ND	4.38	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
MeFOSAA	2355-31-9	ND	1.87	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
EtFOSAA	2991-50-6	ND	1.55	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFUnA	2058-94-8	ND	1.19	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFDS	335-77-3	ND	1.39	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
11Cl-PF3OUdS	763051-92-9	ND	2.73	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
10:2 FTS	120226-60-0	ND	3.54	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFDoA	307-55-1	ND	0.897	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
MeFOSA	31506-32-8	ND	4.18	21.8		B0G0006	02-Jul-20	0.114 L	05-Jul-20 19:17	1
PFTrDA	72629-94-8	ND	0.559	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFDoS	79780-39-5	ND	4.72	5.66		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFTeDA	376-06-7	ND	0.855	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
EtFOSA	4151-50-2	ND	5.58	21.8		B0G0006	02-Jul-20	0.114 L	05-Jul-20 19:17	1
PFHxDA	67905-19-5	ND	0.333	4.53		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
PFODA	16517-11-6	ND	6.95	7.93		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
MeFOSE	24448-09-7	ND	6.87	22.7		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1
EtFOSE	1691-99-2	ND	10.7	22.7		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	87.1	25 - 150		B0F0096	29-Jun-20	0.110 L	30-Jun-20 00:08	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

August 11, 2020

COPY

Mr. Alan Raether
3121 Hecker Road
Manitowoc, WI 54220

Dear Mr. Raether:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 10, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compoundsin drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate no detects of PFOA or PFOS. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached.

If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Project Name NEWTON **Invoice #** E38017
Project # 60135471

Lab Code 5038017C
Sample ID 3121 HECKER
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		6/17/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		6/17/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		6/17/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		6/17/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/17/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		6/17/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		6/17/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		6/17/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		6/17/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		6/17/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		6/17/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		6/17/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		6/17/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		6/17/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		6/17/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		6/17/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		6/17/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		6/17/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		6/17/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		6/17/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		6/17/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		6/17/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		6/17/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		6/17/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		6/17/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/17/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		6/17/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		6/17/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		6/17/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		6/17/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/17/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		6/17/2020	CJR	1

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017C
Sample ID 3121 HECKER
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		6/17/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		6/17/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		6/17/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		6/17/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/17/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		6/17/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		6/17/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		6/17/2020	CJR	1
SUR - 4-Bromofluorobenzene	30.6	REC %			1	8260B		6/17/2020	CJR	1
SUR - Dibromofluoromethane	109	REC %			1	8260B		6/17/2020	CJR	1
SUR - Toluene-d8	105	REC %			1	8260B		6/17/2020	CJR	1

Vista Analytical Laboratory

Sample ID: 3121 Hecker **PFAS Isotope Dilution Method**

Client Data

Name: AECOM
Project: 60135471
Matrix: Aqueous
Date Collected: 10-Jun-20 11:15

Laboratory Data

Lab Sample: 2001266-03
Date Received: 12-Jun-20 09:55
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.811	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFPeA	2706-90-3	ND	1.42	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFBS	375-73-5	ND	1.99	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
4:2 FTS	757124-72-4	ND	1.55	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFHxA	307-24-4	ND	2.42	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFPeS	2706-91-4	ND	2.69	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
HFPO-DA	13252-13-6	ND	5.36	5.56		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFHpA	375-85-9	ND	0.657	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
ADONA	919005-14-4	ND	0.803	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFHxS	355-46-4	ND	1.05	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
6:2 FTS	27619-97-2	ND	2.22	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFOA	335-67-1	ND	0.724	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFHpS	375-92-8	ND	1.04	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFNA	375-95-1	ND	0.901	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFOSA	754-91-6	11.0	1.97	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFOS	1763-23-1	ND	0.897	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
9Cl-PF3ONS	756426-58-1	ND	1.61	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFDA	335-76-2	ND	1.66	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
8:2 FTS	39108-34-4	ND	2.29	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFNS	68259-12-1	ND	4.30	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
MeFOSAA	2355-31-9	ND	1.83	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
EtFOSAA	2991-50-6	ND	1.52	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFUnA	2058-94-8	ND	1.17	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFDS	335-77-3	ND	1.37	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
11Cl-PF3OUdS	763051-92-9	ND	2.68	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
10:2 FTS	120226-60-0	ND	3.48	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFDoA	307-55-1	ND	0.881	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
MeFOSA	31506-32-8	ND	4.26	22.2		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFTrDA	72629-94-8	ND	0.549	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFDoS	79780-39-5	ND	4.64	5.56		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFTeDA	376-06-7	ND	0.839	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
EtFOSA	4151-50-2	ND	5.68	22.2		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFHxDA	67905-19-5	ND	0.327	4.45		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
PFODA	16517-11-6	ND	6.83	7.78		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
MeFOSE	24448-09-7	ND	6.75	22.2		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1
EtFOSE	1691-99-2	ND	10.5	22.2		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	149	25 - 150		B0F0094	17-Jun-20	0.112 L	20-Jun-20 22:04	1

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

COPY

August 11, 2020

Mr. & Mrs. Michael Hardow
3533 CTH CR
Manitowoc, WI 54220

Dear Mr. & Mrs. Hardow:

The City has been conducting sampling of the private potable wells in the vicinity of the Former Newton Gravel Pit. Your private well was included in the sampling that took place on June 10, 2020.

The City recently received the sample results for your property. The results confirm that water from your well does not indicate the presence of volatile organic compounds (VOCs).

As a precautionary measure, the City also tested for an emerging group of contaminants, per- and polyfluoroalkyl substances (PFAS). It is not uncommon to find low levels of PFAS in the environment, as PFAS can be found in fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing, food wrappers, and many other household products. The U.S. Environmental Protection Agency (EPA) set a Lifetime Health Advisory limit for two PFAS compounds in drinking water, perfluorooctanoic acid (PFOA) (CAS 335-67-1) and perfluorooctane sulfonate (PFOS) (CAS 1763-23-1) of 70 parts per trillion (ppt, equal to 70 ng/L). The EPA has not set health advisory levels for other PFAS compounds at this time.

On June 21, 2019 the Wisconsin Department of Health Services (WDHS) made a recommendation to the Wisconsin Department of Natural Resources (WDNR) for PFOA and PFOS standards in groundwater at a proposed enforcement standard of 20 ng/l and a proposed preventive action limit of 2 ng/l. Based upon these recommendations the WDNR is reviewing both proposed standards. Wisconsin does not currently have regulatory drinking water standards for PFAS and there is no proposed standard for perfluorooctanesulfonamide (PFOSA) (CAS 754-91-6).

Analytical results for your well indicate the presence of PFOA at 9.07 ng/l and the presence of PFOS at 3.83 ng/l totaling 12.9 ng/l. Your results are below the EPA lifetime health advisory limit of 70 ng/l and the proposed WDHS enforcement standard of 20 ng/l. Enclosed is an EPA Fact Sheet with more information regarding PFOA and PFOS in drinking water. If you have additional questions regarding your results please contact Dr. Curtis Hedman, WDHS, at the number listed below.

CITY OF MANITOWOC

WISCONSIN, USA

www.manitowoc.org

According to state and federal guidelines you can continue to use your water with no limitations. A copy of your VOC and PFAS laboratory analytical results are attached. If you have questions please feel free to call us or the WDNR and WDHS contacts listed below:

- Well water/sample results: Jim Kasdorf (920) 387-7872
  WDNR, Drinking & Groundwater
- Investigation/future activities: Tauren Beggs (920) 662-5178
  WDNR, Remediation & Redevelopment
- Health Questions: Curtis Hedman, Ph.D. (608) 287-4152
  Wisconsin Department of Health Services
- General Questions: Karen Dorow (920) 686-6514
  City of Manitowoc, Business Manager for Department of Public Infrastructure

Sincerely,

Kathleen McDaniel
City Attorney
City of Manitowoc

, P.E.

Dan Koski, P.E.
Director of Public Infrastructure
City of Manitowoc

Attachment: Laboratory Data

Cc: ORP Real Estate Holdings
Attn: Dave Nagy
1746 Executive Drive
Oconomowoc, WI 53066

Project Name NEWTON **Invoice #** E38017
Project # 60135471

Lab Code 5038017B
Sample ID 3533 CTHCR
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		6/17/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		6/17/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		6/17/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		6/17/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/17/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		6/17/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		6/17/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		6/17/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		6/17/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		6/17/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		6/17/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		6/17/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		6/17/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		6/17/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		6/17/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		6/17/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		6/17/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		6/17/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		6/17/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		6/17/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		6/17/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		6/17/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		6/17/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		6/17/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		6/17/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/17/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		6/17/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		6/17/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		6/17/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	3.3	1	8260B		6/17/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33	1	1	8260B		6/17/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/17/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		6/17/2020	CJR	1

Project Name NEWTON
Project # 60135471

Invoice # E38017

Lab Code 5038017B
Sample ID 3533 CTHCR
Sample Matrix Water
Sample Date 6/10/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		6/17/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		6/17/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		6/17/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		6/17/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		6/17/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		6/17/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		6/17/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/17/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		6/17/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		6/17/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		6/17/2020	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		6/17/2020	CJR	1
SUR - 4-Bromofluorobenzene	28.9	REC %			1	8260B		6/17/2020	CJR	1
SUR - Dibromofluoromethane	108	REC %			1	8260B		6/17/2020	CJR	1

Vista Analytical Laboratory

Sample ID: 3533 CTH CR — **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2001266-02	Column:	BEH C18
Project:	60135471	Date Collected:	10-Jun-20 09:45	Date Received:	12-Jun-20 09:55		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	2.74	0.860	4.72	J	B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFPeA	2706-90-3	ND	1.51	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFBS	375-73-5	ND	2.11	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
4:2 FTS	757124-72-4	ND	1.64	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFHxA	307-24-4	ND	2.57	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFPeS	2706-91-4	ND	2.86	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
HFPO-DA	13252-13-6	ND	5.69	5.90		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFHpA	375-85-9	ND	0.697	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
ADONA	919005-14-4	ND	0.852	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFHxS	355-46-4	1.79	1.12	4.72	J, Q	B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
6:2 FTS	27619-97-2	ND	2.36	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFOA	335-67-1	9.07	0.768	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFHpS	375-92-8	ND	1.11	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFNA	375-95-1	ND	0.956	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFOSA	754-91-6	12.3	2.09	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFOS	1763-23-1	3.83	0.952	4.72	J, Q	B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
9Cl-PF3ONS	756426-58-1	ND	1.71	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFDA	335-76-2	ND	1.76	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
8:2 FTS	39108-34-4	ND	2.43	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFNS	68259-12-1	ND	4.57	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
MeFOSAA	2355-31-9	ND	1.95	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
EtFOSAA	2991-50-6	ND	1.62	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFUnA	2058-94-8	ND	1.24	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFDS	335-77-3	ND	1.45	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
11Cl-PF3OUdS	763051-92-9	ND	2.84	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
10:2 FTS	120226-60-0	ND	3.69	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFDoA	307-55-1	ND	0.935	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
MeFOSA	31506-32-8	ND	4.52	23.6		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFTrDA	72629-94-8	ND	0.583	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFDoS	79780-39-5	ND	4.92	5.90		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFTeDA	376-06-7	ND	0.891	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
EtFOSA	4151-50-2	ND	6.03	23.6		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFHxDA	67905-19-5	ND	0.347	4.72		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
PFODA	16517-11-6	ND	7.25	8.26		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
MeFOSE	24448-09-7	ND	7.16	23.6		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1
EtFOSE	1691-99-2	ND	11.1	23.6		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	141	25 - 150		B0F0094	17-Jun-20	0.106 L	20-Jun-20 21:53	1

United States Environmental Protection Agency

FACT SHEET
PFOA & PFOS Drinking Water Health Advisories

Overview

EPA has established health advisories for PFOA and PFOS based on the agency's assessment of the latest peer-reviewed science to provide drinking water system operators, and state, tribal and local officials who have the primary responsibility for overseeing these systems, with information on the health risks of these chemicals, so they can take the appropriate actions to protect their residents. EPA is committed to supporting states and public water systems as they determine the appropriate steps to reduce exposure to PFOA and PFOS in drinking water. As science on health effects of these chemicals evolves, EPA will continue to evaluate new evidence.

Background on PFOA and PFOS

PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). PFOA and PFOS have been the most extensively produced and studied of these chemicals. They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease or stains. They are also used for firefighting at airfields and in a number of industrial processes.

Because these chemicals have been used in an array of consumer products, most people have been exposed to them. Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer. In 2006, eight major companies voluntarily agreed to phase out their global production of PFOA and PFOA-related chemicals, although there are a limited number of ongoing uses. Scientists have found PFOA and PFOS in the blood of nearly all the people they tested, but these studies show that the levels of PFOA and PFOS in blood have been decreasing. While consumer products and food are a large source of exposure to these chemicals for most people, drinking water can be an additional source in the small percentage of communities where these chemicals have contaminated water supplies. Such contamination is typically localized and associated with a specific facility, for example, an industrial facility where these chemicals were produced or used to manufacture other products or an airfield at which they were used for firefighting.

EPA's 2016 Lifetime Health Advisories

EPA develops health advisories to provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's health advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination. In 2009, EPA published provisional health advisories for PFOA and PFOS based on the evidence available at that time. The science has evolved since then and EPA is now replacing the 2009 provisional advisories with new, lifetime health advisories.

FACT SHEET
PFOA & PFOS Drinking Water Health Advisories

EPA's 2016 Lifetime Health Advisories, continued

To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, EPA established the health advisory levels at 70 parts per trillion. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS should be compared with the 70 parts per trillion health advisory level. This health advisory level offers a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOA and PFOS in drinking water.

How the Health Advisories were developed

EPA's health advisories are based on the best available peer-reviewed studies of the effects of PFOA and PFOS on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations that have been exposed to PFASs. These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes).

EPA's health advisory levels were calculated to offer a margin of protection against adverse health effects to the most sensitive populations: fetuses during pregnancy and breastfed infants. The health advisory levels are calculated based on the drinking water intake of lactating women, who drink more water than other people and can pass these chemicals along to nursing infants through breastmilk.

Recommended Actions for Drinking Water Systems

Steps to Assess Contamination

If water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope and localized source of contamination to inform next steps

Steps to Inform

If water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should promptly notify their State drinking water safety agency (or with EPA in jurisdictions for which EPA is the primary drinking water safety agency) and consult with the relevant agency on the best approach to conduct additional sampling.

Drinking water systems and public health officials should also promptly provide consumers with information about the levels of PFOA and PFOS in their drinking water. This notice should include specific information on the risks to fetuses during pregnancy and breastfed and formula-fed infants from exposure to drinking water with an individual or combined concentration of PFOA and PFOS above EPA's health advisory level of 70 parts per trillion. In addition, the notification should include actions they are taking and identify options that consumers may consider to reduce risk such as seeking an alternative drinking water source, or in the case of parents of formula-fed infants, using formula that does not require adding water.

FACT SHEET
PFOA & PFOS Drinking Water Health Advisories

Recommended Actions for Drinking Water Systems, continued

Steps to Limit Exposure

A number of options are available to drinking water systems to lower concentrations of PFOA and PFOS in their drinking water supply. In some cases, drinking water systems can reduce concentrations of perfluoroalkyl substances, including PFOA and PFOS, by closing contaminated wells or changing rates of blending of water sources. Alternatively, public water systems can treat source water with activated carbon or high pressure membrane systems (e.g., reverse osmosis) to remove PFOA and PFOS from drinking water. These treatment systems are used by some public water systems today, but should be carefully designed and maintained to ensure that they are effective for treating PFOA and PFOS. In some communities, entities have provided bottled water to consumers while steps to reduce or remove PFOA or PFOS from drinking water or to establish a new water supply are completed.

Many home drinking water treatment units are certified by independent accredited third party organizations against American National Standards Institute (ANSI) standards to verify their contaminant removal claims. NSF International (NSF®) has developed a protocol for NSF/ANSI Standards 53 and 58 that establishes minimum requirements for materials, design and construction, and performance of point-of-use (POU) activated carbon drinking water treatment systems and reverse osmosis systems that are designed to reduce PFOA and PFOS in public water supplies. The protocol has been established to certify systems (e.g., home treatment systems) that meet the minimum requirements. The systems are evaluated for contaminant reduction by challenging them with an influent of 1.5±30% µg/L (total of both PFOA and PFOS) and must reduce this concentration by more than 95% to 0.07 µg/L or less (total of both PFOA and PFOS) throughout the manufacturer's stated life of the treatment system. Product certification to this protocol for testing home treatment systems verifies that devices effectively reduces PFOA and PFOS to acceptable levels.

Other Actions Relating to PFOA and PFOS

Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer, 3M. EPA also issued regulations to limit future manufacturing, including importation, of PFOS and its precursors, without first having EPA review the new use. A limited set of existing uses for PFOS (fire resistant aviation hydraulic fluids, photography and film products, photomicrolithography process to produce semiconductors, metal finishing and plating baths, component of an etchant) was excluded from these regulations because these uses were ongoing and alternatives were not available.

In 2006, EPA asked eight major companies to commit to working toward the elimination of their production and use of PFOA, and chemicals that degrade to PFOA, from emissions and products by the end of 2015. All eight companies have indicated that they have phased out PFOA, and chemicals that degrade to PFOA, from emissions and products by the end of 2015. Additionally, PFOA is included in EPA's proposed Toxic Substance Control Act's Significant New Use Rule (SNUR) issued in January 2015 which will ensure that EPA has an opportunity to review any efforts to reintroduce the chemical into the marketplace and take action, as necessary, to address potential concerns.

FACT SHEET
PFOA & PFOS Drinking Water Health Advisories

Other Actions Relating to PFOA and PFOS, continued

EPA has not established national primary drinking water regulations for PFOA and PFOS. EPA is evaluating PFOA and PFOS as drinking water contaminants in accordance with the process required by the Safe Drinking Water Act (SDWA). To regulate a contaminant under SDWA, EPA must find that it: (1) may have adverse health effects; (2) occurs frequently (or there is a substantial likelihood that it occurs frequently) at levels of public health concern; and (3) there is a meaningful opportunity for health risk reduction for people served by public water systems.

EPA included PFOA and PFOS among the list of contaminants that water systems are required to monitor under the third Unregulated Contaminant Monitoring Rule (UCMR 3) in 2012. Results of this monitoring effort are updated regularly and can be found on the publicly-available National Contaminant Occurrence Database (NCOD) (https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule#3). In accordance with SDWA, EPA will consider the occurrence data from UCMR 3, along with the peer reviewed health effects assessments supporting the PFOA and PFOS Health Advisories, to make a regulatory determination on whether to initiate the process to develop a national primary drinking water regulation.

In addition, EPA plans to begin a separate effort to determine the range of PFAS for which an Integrated Risk Information System (IRIS) assessment is needed. The IRIS Program identifies and characterizes the health hazards of chemicals found in the environment. IRIS assessments inform the first two steps of the risk assessment process: hazard identification, and dose-response. As indicated in the 2015 IRIS Multi-Year Agenda, the IRIS Program will be working with other EPA offices to determine the range of PFAS compounds and the scope of assessment required to best meet Agency needs. More about this effort can be found at https://www.epa.gov/iris/iris-agenda.

Non-Drinking Water Exposure to PFOA and PFOS

These health advisories only apply to exposure scenarios involving drinking water. They are not appropriate for use, in identifying risk levels for ingestion of food sources, including: fish, meat produced from livestock that consumes contaminated water, or crops irrigated with contaminated water.

The health advisories are based on exposure from drinking water ingestion, not from skin contact or breathing. The advisory values are calculated based on drinking water consumption and household use of drinking water during food preparation (e.g., cooking or to prepare coffee, tea or soup). To develop the advisories, EPA considered non-drinking water sources of exposure to PFOA and PFOS, including: air, food, dust, and consumer products. In January 2016 the Food and Drug Administration amended its regulations to no longer allow PFOA and PFOS to be added in food packaging, which will likely decrease one source of non-drinking water exposure.

Where Can I Learn More?

- EPA's Drinking Water Health Advisories for PFOA and PFOS can be found at: https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos
- PFOA and PFOS data collected under EPA's Unregulated Contaminant Monitoring Rule are available: https://www.epa.gov/dwucmr/occurrence-data-unregulated-con taminant-monitoring-rule
- EPA's stewardship program for PFAS related to TSCA: https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/and -polyfluoroalkyl-substances-pfass-under-tsca
- EPA's research activities on PFASs can be found at: http://www.epa.gov/chemical-research/perfluorinated-chemical-pfc-research
- The Agency for Toxic Substances and Disease Registry's Perflourinated Chemicals and Your Health webpage at: http://www.atsdr.cdc.gov/PFC/

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