AECOM
1555 N. RiverCenter Drive, Suite 214
Milwaukee, WI 53212

414.944.6080 tel
414.944.6081 fax

Letter of Transmittal

Attention:	Mr. Tauren Beggs Hydrogeologist, WDNR 2984 Shawano Ave Green Bay, WI 54313	Date:	09/28/18
Project reference:	Former Newton Pit BRRTS No. 02-36-000268	Project number:	60135471

We are sending you the following:

Number of originals:	Number of copies:	Description:
One	Zero	May 2018 Semi-Annual Potable Well Monitoring Letter Report

Mr. Beggs,

Attached is the May 2018 Semi-Annual Potable Well Monitoring Letter Report for the Former Town of Newton Gravel Pit, Manitowoc Wisconsin.

Please let me know if you have any questions.

Thank you.

D. S. Henderson

David Henderson, P.E.
Senior Project Manager
D 414.944.6190 C 414.429.8304
dave.henderson@aecom.com

Cc: Kathleen M. McDaniel, City Attorney, City of Manitowoc
Dan Koski, Director of Public Infrastructure, City of Manitowoc
Jim Kasdorf, Water Supply Specialist, WDNR

AECOM
1555 N RiverCenter Dr, Suite 214
Milwaukee, Wisconsin 53212

414.944.6080 tel
414.944.6081 fax

September 28, 2018

Mr. Tauren Beggs
Hydrogeologist
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay WI 54313-6727

Subject: May 2018 Semi-Annual Potable Well Monitoring Letter Report
Former Town of Newton Gravel Pit
BRRTS No. 02-36-000268
AECOM Project No: 60135471(82518)

Dear Mr. Beggs:

AECOM Technical Services, Inc. (AECOM), on the behalf of the City of Manitowoc, is pleased to submit this Semi-Annual Potable Well Monitoring Letter Report for wells in the vicinity of the Former Town of Newton Gravel Pit site (See Figure1). The report provides the results from the May 2018 sampling event.

Presented below are site background information, sampling methodology, and the potable well monitoring results.

BACKGROUND INFORMATION

Regular monitoring has been ongoing since November 2013, when volatile organic compounds (VOCs) were discovered in private potable wells near the Former Town of Newton Gravel Pit. The most recent sampling was conducted in accordance with the Wisconsin Department of Natural Resources (WDNR) approved Five Year Potable Well Monitoring Work Plan. The Work Plan grouped the potable wells into the following categories:

- Target Zone Wells – wells with detectable contaminants of concern (COCs).
- Target Zone Sentinel Wells – wells within the Target Zone and do not have detectable COCs.
- Sentinel Zone Wells – wells outside and adjacent to the Target Zone that do not have detectable COCs.
    - Sentinel Zone 3-Year Wells – Sentinel Zone Wells which will be sampled once every three years on a rotating schedule.
    - Sentinel Zone 5-Year Wells – Sentinel Zone Wells which will be sampled once every five years on a rotating schedule.
- Replacement Wells – wells that were replaced due to regulatory standard exceedances of COCs.
- Upgradient and Historically Sampled Wells – wells outside the Sentinel Zone that have been sampled in the past but are not currently scheduled to be sampled.
- Former Potable Wells Now Connected to City Water – wells that were replaced with connections to the City of Manitowoc public water supply that are not currently scheduled to be sampled.

SAMPLING METHODOLOGY

The May 2018 sampling also includes reporting of monitoring conducted since the October 2017 event. In total, 26 water samples, excluding water quality and quality control samples, were obtained from 21 wells. Details of the monitoring event are as follows.

November 8, 2017 the WDNR completed sampling at 3008 S 26th Street adjacent to the 2918 S 26th Street replacement well.

November 8, 2017 WDNR Sampling Sampling Address
3008 S 26TH Street

On December 11, 2017 AECOM conducted the first VOC sampling event on the replacement well at 2918 S 26th Street was completed.

December 11, 2017 Target Zone Well Sampling Address
2918 S 26TH Street (replacement)

On December 14 and 19, 2017 the WDNR completed sampling at 8 wells in the vicinity of the 2918 S 26th Street replacement well.

December 14 & 19, 2017 WDNR Sampling Sampling Addresses	
2201 Elm Road	2501 Nelson Lane
2408 Elm Road	2915 S 26TH Street
2417 Elm Road	3008 S 26TH Street (confirmation)
2514 Elm Road	3203 S 26TH Street

On February 14, 2018 the WDNR resampled at 2201 Elm Road to confirm the December 19, 2017 sample results.

February 14, 2018 WDNR Sampling Sampling Address
2201 Elm Road

On March 5, 2018 AECOM conducted the second VOC sampling event on the replacement well at 2918 S 26th Street was completed. Additionally, water quality samples were collected from 3 replacement wells at 2918 S 26th Street, 4005 Thunder Ridge Road, and 4010 Thunder Ridge Road.

March 5, 2018 Target Zone Well Sampling Addresses
2918 S 26TH Street (replacement)
4005 Thunder Ridge Road (replacement)
4010 Thunder Ridge Road (replacement)

May 21, 2018, AECOM sampled a total of 11 wells (a total of 12 samples with quality control sampling) from the target zone wells.

May 21, 2018 Target Zone Wells Sampling Addresses	
3817 Viebahn Street	4101 Thunder Ridge Road
3327 Hecker Road	4111 Thunder Ridge Road
3461 (3417) Hecker Road	3911 Blackhawk Court
3702 Hecker Road	3921 Blackhawk Court
3618 CTH CR	4159 Silver Creek Road
4027 Thunder Ridge Road	

Following receipt of the May 21, 2018 sampling event analytical results, on May 31, 2018, AECOM obtained one confirmation sample and one sample from a well that was unavailable to be sampled during the initial sampling event were collected.

May 31, 2018 Target Zone Well Sampling Addresses
4027 Thunder Ridge Road (confirmation)
3027 Orchard Lane

AECOM obtained a confirmation sample from one additional well on June 5, 2018.

June 5, 2018 Target Zone Well Sampling Address
4111 Thunder Ridge Road (confirmation)

Samples were collected following purging from a cold water tap or spigot as near to the well as possible, and preferably before any storage/pressure tanks or physical/chemical treatment system that might be present.

Samples for VOC laboratory analyses were collected in three 40-ml glass vials with hydrochloric acid preservative and Teflon septa. The vials were filled to the top, leaving no headspace or bubbles, and then quickly capped. Samples were labeled and stored on ice for shipment, with chain of custody, to the laboratory.

Samples collected by the WDNR were submitted to the Wisconsin State Laboratory of Hygiene, Madison, Wisconsin for analyses of VOCs by EPA Method 8260B. Samples collected by AECOM were submitted to a Wisconsin Administrative Code (WAC) Chapter NR 149 certified commercial

laboratory (Synergy Environmental Lab, Inc., Appleton, Wisconsin) for analyses of VOCs by EPA Method 8260B.

MONITORING RESULTS

The results for the May 2018 sampling events are discussed below. During this period a total of 26 VOC samples (not including water quality and quality control samples) were obtained from 21 wells, with the WDNR obtaining 10 samples and AECOM obtaining 16 samples.

Laboratory Analytical Results

The laboratory analytical data indicates that VOC contaminant compounds are present in some of the potable well water samples.

The concentration of the VOC COCs found in the potable well water samples were compared to applicable WAC Chapter NR 140 Table 1 Public Health enforcement standards (ESs) and preventive action limits (PALs).

The laboratory analytical results are presented categorically as follows:

- VOC COCs with NR 140 ES exceedances
- VOC COCs with NR 140 PAL exceedances
- Detected VOC COCs with no regulatory exceedances
- Observed changes in analytical results since the last monitoring event

Wells with NR 140 COC ES Exceedances:
There were four wells that had an ES exceedance for vinyl chloride. Vinyl chloride was not detected in the initial December 19, 2017 sample from 2201 Elm Road but was detected in the February 14, 2018 sampling event to confirm the earlier cis-1,2-dichloroethene (cis-1,2-dce) detect. Vinyl chloride was not detected in either 4027 Thunder Ridge Road or 4111 Thunder Ridge Road in the confirmation sampling. No wells had an ES exceedance for cis-1,2-dce.

ES Exceedances of Vinyl Chloride
3008 S 26TH Street
4027 Thunder Ridge Road
4111 Thunder Ridge Road
2201 Elm Road

Wells with NR 140 COC PAL Exceedances:
There were no wells that had a PAL exceedance for vinyl chloride or cis-1,2-dce.

PAL Exceedances
No wells with PAL exceedances

Detected COCs with No Regulatory Exceedances:
There were a total of eight potable wells that only had a single COC (cis-1,2-dce) below regulatory (PAL) limits. This does not include the initial sample results for 2201 Elm Road and the confirmation sample results for 4027 Thunder Ridge Road or 4111 Thunder Ridge Road.

Cis-1,2-dichloroethene Detects	
3817 Viebahn Street	4101 Thunder Ridge Road
3327 Hecker Road	3911 Blackhawk Court
3461 (3417) Hecker Road	3921 Blackhawk Court
3618 CTH CR	4159 Silver Creek Road

A summary of the sampled wells with detected laboratory analytical results is presented on Table 1 and on Figure 2. Table 2, electronic file on CD only, provides a summary of the analytical results for all wells sampled. The laboratory analytical reports are provided in Attachment A.

OBSERVED CHANGES SINCE LAST MONITORING EVENT

Since the October 2017 sampling event one new replacement well has been installed and sampled. There are currently a total of twelve replacement potable wells. The most recent replacement well is located at 2918 S 26th Street.

The following changes were noted in the analytical results since the October 2017 sampling event:

- The following wells either had a new vinyl chloride detection or a change in vinyl chloride from a non-detect to a detect above the ES with continued detection of cis-1,2-dce below the PAL.
  - 3008 S 26TH Street
  - 4027 Thunder Ridge Road
  - 4111 Thunder Ridge Road
  - 2201 Elm Road

- The following well had a change in cis-1,2-dce from a non-detect to a detect above the laboratory method detection limit (MDL) but below the PAL with continued non-detect of vinyl chloride.
  - 3911 Black Hawk Court, this well has historically had cis-1,2-dce detects.

UPDATES TO POTABLE WELL MONITORING WORK PLAN

The WDNR has approved a Five Year Potable Well Monitoring Work Plan dated May 8, 2017. The sampling schedule in the Work Plan for the October 2018 sampling event has not been updated, but a new sampling work plan for the wells in the vicinity of South 26th Street is under review. The potable well monitoring schedule from the Work Plan is presented on Table 3, attached.

SUMMARY

The following is a summary of the May 2018 potable well monitoring event.

Four wells, 2201 Elm Road, 3008 S 26th Street, 4027 Thunder Ridge Road, and 4111 Thunder Ridge Road, had a detect of vinyl chloride above the ES.

Analytical results from eight potable well water samples indicate a single contaminant of concern (cis-1,2-dce) below regulatory (PAL) limits.

The most recent replacement potable well at 2918 S 26th Street has no VOC detects above laboratory MDLs.

All other monitored wells had no VOC detects above laboratory MDLs.

The next semi-annual potable well monitoring event is scheduled for October 2018. The sampling will be conducted in accordance with the Five Year Potable Well Monitoring Work Plan dated May 8, 2017.

If you have any questions regarding these results, please contact Dave Henderson at 414.944.6190 or dave.henderson@aecom.com.

Yours sincerely,
AECOM Technical Services, Inc.

Sarah Krueger
Project Scientist

David Henderson, P.E.
Project Manager

Cc: Kathleen M. McDaniel, City Attorney, City of Manitowoc
Dan Koski, Director of Public Infrastructure, City of Manitowoc
Jim Kasdorf, Water Supply Specialist, WDNR

Attachments: Tables, Figures, Attachment A: Laboratory Reports

AECOM

Tables:

Table 1, Summary of Contaminates Detected in Potable Wells
Table 2, Summary of Contaminates Analyzed in Potable Wells
(Table 2 provided only on electric (CD) copy of report)
Table 3, Summary of Five Year Potable Well Sampling Plan

Table 1
SUMMARY OF CONTAMINANTS DETECTED IN POTABLE WELLS

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3114 Hecker Rd			3303 Hecker Rd							
							Original Potable Well							
Analyte	Units	ES	PAL	10/22/13 Outside Spigot	11/8/13 Outside Spigot	5/28/14 Outside Spigot	10/23/13 Basement	11/7/13 Basement	6/3/14 Basement	06/03/14 (DUP) Basement	11/17/14 Basement	2/23/15 Basement	10/13/15 Basement	3/30/16 Basement
Volatile Organic Compounds (VOCs) (µg/L):														
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	1.36 J	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	0.68 J	0.68 J	< 0.38	< 0.45	1.94	2.53
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	***0.44 J***	***0.51 J***
Total Metals														
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)														
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3303 Hecker Rd						3327 Hecker Rd								
				Replacement Potable Well														
Analyte	Units	ES	PAL	8/8/16 Basement	9/26/16 Basement	10/24/16 Basement	10/24/16 Basement-Vial 2	10/24/16 Basement-Vial 3	11/8/16 Basement	10/23/13 Outside Spigot	11/7/13 Outside Spigot	5/28/14 Outside Spigot	8/25/14 Outside Spigot	11/10/14 Outside Spigot	2/23/15 Kitchen Sink	10/14/15 Outside Spigot	3/31/16 Kitchen Sink	10/5/16 Outside Spigot
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	6.8	< 1	2.6 J	< 1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	**11**	**11.6**	6.4	6.9	5.6	4.3	4.2	3.2	3.3
Methylene Chloride	ug/l	5	0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	1374	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	3327 Hecker Rd				3461(3417) Hecker Rd										
				5/30/17 Outside Spigot	10/25/17 Outside Spigot	5/21/18 Outside Spigot	05/21/18 (DUP) Outside Spigot	10/24/13 Inside Sink	11/12/13 Inside Sink	5/30/14 Inside Sink	8/26/14 Inside Sink	11/10/14 Inside Sink	2/24/15 Inside Sink	10/13/15 Inside Sink	3/30/16 Inside Sink	03/30/16 (DUP) Inside Sink	10/06/16 (DUP) Inside Sink	5/31/17 Inside Sink
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.46	< 0.46	< 0.42	< 0.42	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.45	< 0.45	< 0.25	< 0.25	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45
Benzene	ug/l	5	0.5	< 0.17	< 0.17	< 0.22	< 0.22	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.27	< 0.27	< 0.26	< 0.26	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	0.32 J
Chloroform	ug/l	6	0.6	< 0.96	< 0.96	< 0.26	< 0.26	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 1.3	< 1.3	< 0.54	< 0.54	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	2.38	4	4.5	4.2	2.58	2.15	2.12	1.79	1.49	1.59	1.6	1.66	1.74	1.51	0.55 J
Methylene Chloride	ug/l	5	0.5	< 0.94	< 0.94	< 1.32	< 1.32	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94
Toluene	ug/l	800	160	< 0.67	< 0.67	< 0.19	< 0.19	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.34	< 0.34	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.19	< 0.19	< 0.2	< 0.2	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	3461(3417) Hecker Rd		3515 Hecker Rd										
						Original Potable Well						Replacement Potable Well				
				10/25/17 Inside Sink	5/21/18 Inside Sink	10/22/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Inside Kitchen	11/22/13 Outside Spigot	5/28/14 Outside Spigot	8/28/14 Outside Spigot	9/29/14 Outside Spigot	11/4/14 Outside Spigot	2/23/15 Pressure Tank	10/14/15 Pressure Tank	10/5/16 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																
1,1-Dichloroethene	ug/l	7	0.7	< 0.46	< 0.42	< 0.4	< 0.4	< 0.4	NA	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.45	< 0.25	< 0.41	< 0.41	< 0.41	NA	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.17	< 0.22	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.27	< 0.26	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.96	< 0.26	< 0.28	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 1.3	< 0.54	1.02 J	< 0.81	< 0.81	NA	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.35	1.87	**7.4**	**7.4**	**7.2**	NA	**10**	**7.8**	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
Methylene Chloride	ug/l	5	0.5	< 0.94	< 1.32	< 0.5	< 0.5	< 0.5	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.67	< 0.19	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.34	< 0.35	< 0.35	< 0.35	NA	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	< 0.19	< 0.2	***0.22 J***	***0.24 J***	***0.24 J***	NA	***0.47 J***	***0.28 J***	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Total Metals																
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	**1.9**	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	150	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	0.34 J	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	0.061 J	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1504	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2156	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	3518 Hecker Rd												
				Original Potable Well			Replacement Potable Well									
				10/23/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Outside Spigot	3/11/14 Outside Spigot	03/11/14 (DUP) Outside Spigot	3/31/14 Outside Spigot	4/22/14 Outside Spigot	05/29/14 (DUP) Outside Spigot	8/25/14 Outside Spigot	11/10/14 Outside Spigot	2/23/15 Pressure Tank	10/14/15 Pressure Tank	10/6/16 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																
1,1-Dichloroethene	ug/l	7	0.7	**1.62**	< 4	< 4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	0.42 J	< 4.1	< 4.1	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
Benzene	ug/l	5	0.5	**1.74**	< 2.4	< 2.4	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 2.4	< 2.4	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 2.8	< 2.8	< 0.28	< 0.28	0.45 J	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 8.1	< 8.1	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	***510***	***530***	***510***	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
Methylene Chloride	ug/l	5	0.5	< 0.5	< 5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.69	< 6.9	< 6.9	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	5.5	< 3.5	< 3.5	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	***102***	***92***	***86***	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Total Metals																
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1448	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2064	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3609 Hecker Rd														
				Original Potable Well									Replacement Potable Well					
Analyte	Units	ES	PAL	10/22/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Inside Kitchen	11/22/13 Outside Spigot	5/28/14 Ouside Spigot	05/28/14 (DUP) Ouside Spigot	7/11/14 Pressure Tank	8/25/14 Pressure Tank	08/25/14 (DUP) Pressure Tank	9/29/14 Pressure Tank	11/4/14 Pressure Tank	2/24/15 Pressure Tank	10/13/15 Pressure Tank	10/5/16 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	NA	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	NA	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	NA	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	**45**	**46**	**45**	NA	**49**	**49**	**51**	**35**	**36**	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
Methylene Chloride	ug/l	5	0.5	**0.82 J**	< 0.5	< 0.5	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	0.39 J	NA	0.42 J	0.37 J	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	***1***	***1.02***	***1.09***	NA	***7.4***	***7.6***	***8.6***	***4.6***	***5.2***	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	0.32 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	0.56 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	< 0.049	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1591	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2264	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3702 Hecker Rd												4159 Silver Creek Rd		
Analyte	Units	ES	PAL	10/22/13 Outside Spigot	11/12/13 Outside Spigot	6/3/14 Outside Spigot	8/25/14 Outside Spigot	11/13/14 Outside Spigot	10/14/15 Outside Spigot	10/14/15 (DUP) Outside Spigot	3/31/16 Pressure Tank	10/11/16 Pressure Tank	5/30/17 Outside Spigot	10/25/17 Outside Spigot	5/21/18 Outside Spigot	12/12/13 Pressure Tank	1/6/14 Pressure Tank	6/4/14 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.4	< 0.4	< 0.4
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.41	< 0.41	< 0.41
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.24	< 0.24	< 0.24
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.24	< 0.24	< 0.24
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.28	< 0.28	< 0.28
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.81	< 0.81	< 0.81
cis-1,2-Dichloroethene	ug/l	70	7	0.71 J	0.61 J	< 0.38	< 0.38	< 0.38	0.48 J	0.73 J	< 0.45	1.04 J	0.51 J	< 0.41	< 0.37	0.49 J	0.73 J	0.72 J
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 0.5	< 0.5	< 0.5
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.69	< 0.69	< 0.69
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.35	< 0.35	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	< 0.18	< 0.18	< 0.18
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	4159 Silver Creek Rd										
				06/04/14 (DUP) Pressure Tank	9/8/14 Pressure Tank	11/10/14 Pressure Tank	11/10/14 (DUP) Pressure Tank	2/23/15 Pressure Tank	10/14/15 Pressure Tank	3/30/16 Pressure Tank	10/10/16 Pressure Tank	5/30/17 Pressure Tank	10/25/17 Pressure Tank	5/21/18 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):														
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.64 J	0.54 J	0.59 J	0.52 J	0.56 J	0.55 J	0.59 J	0.78 J	0.52 J	0.67 J	0.94 J
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2
Total Metals														
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)														
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2717 CTH CR(4141 Viebahn St)								2734(2804) CTH CR						
				Original Potable Well						Non-Potable Well (City Water Provided Dec 2016)		Original Potable Well (City Water Provided Dec 2016)						
Analyte	Units	ES	PAL	8/25/14 Pressure Tank	9/8/14 Pressure Tank	09/08/14 (DUP) Pressure Tank	11/10/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	3/31/16 Garage Faucet	10/6/16 Garage Faucet	6/3/14 Garage Spigot	8/25/14 Garage Spigot	11/10/14 Garage Spigot	11/25/14 Garage Spigot	11/25/14 (DUP) Garage Spigot	2/24/15 Pressure Tank	10/14/15 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 0.81	**24.3**	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.4	1.31	1.44	1.3	1.26 J	1.72	< 0.45	1.53	0.77 J	0.77 J	0.63 J	0.93 J	1.02 J	0.7 J	0.94 J
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	***0.21 J***	***0.29 J***	***0.31 J***	***0.39 J***	***0.35 J***	***0.47 J***	< 0.17	***0.32 J***	< 0.18	< 0.18	***0.26 J***	***0.38 J***	***0.43 J***	***0.2 J***	***0.45 J***
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2916 CTH CR								2917 CTH CR				
				Original Potable Well								Original Potable Well (City Water Provided Dec 2016)				
Analyte	Units	ES	PAL	2/4/14 Pressure Tank	5/28/14 Pressure Tank	8/25/14 Pressure Tank	11/10/14 Pressure Tank	11/25/14 Pressure Tank	3/11/15 Pressure Tank	03/11/15 (DUP) Pressure Tank	10/13/15 Pressure Tank	2/4/14 Kitchen Sink	5/30/14 Kitchen Sink	10/13/15 Spigot	10/27/15 Spigot	10/27/15 (DUP) Spigot
Volatile Organic Compounds (VOCs) (µg/L):																
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.54	< 0.48	< 0.41	< 0.41	< 0.48	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	0.97 J	0.9 J	1.02 J	0.74 J	0.82 J	0.75 J	0.8 J	1.02 J	< 0.38	< 0.38	1.6	1.41	1.67
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	**0.18 J**	< 0.18	< 0.18	***0.28 J***	***0.37 J***	< 0.17	**0.18 J**	***0.26 J***	< 0.18	< 0.18	***0.43 J***	***0.37 J***	***0.37 J***
Total Metals																
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3023 CTH CR									3120 CTH CR					
				Original Potable Well				Replacement Potable Well					Original Potable Well					
Analyte	Units	ES	PAL	2/4/14 Outside Spigot	02/04/14 (DUP) Outside Spigot	6/2/14 Outside Spigot	8/25/14 Outside Spigot	10/8/14 Outside Spigot	11/4/14 Outside Spigot	2/24/15 Outside Spigot	10/13/15 Outside Spigot	10/5/16 Outside Spigot	1/3/14 Pressure Tank	2/4/14 Pressure Tank	5/28/14 Pressure Tank	05/28/14 (DUP) Pressure Tank	8/25/14 Pressure Tank	08/25/14 (DUP) Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81
cis-1,2-Dichloroethene	ug/l	70	7	2.84	2.96	2.87	2.34	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45	2.74	2.86	2.65	2.68	1.89	2.23
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35
Vinyl chloride	ug/l	0.2	0.02	***0.55 J***	***0.58***	***0.41 J***	***0.33 J***	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	***0.6***	***0.43 J***	***0.35 J***	***0.26 J***	***0.27 J***	***0.24 J***
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	1545	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	2164	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3120 CTH CR					3403 CTH CR								
				Replacement Potable Well					Original Potable Well				Replacement Potable Well				
Analyte	Units	ES	PAL	10/8/14 Pressure Tank	11/4/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	10/6/16 Pressure Tank	1/3/14 Kitchen Sink	2/5/14 Kitchen Sink	5/28/14 Kitchen Sink	8/25/14 Kitchen Sink	10/21/14 Kitchen Sink	11/4/14 Kitchen Sink	2/23/15 Kitchen Sink	10/13/15 Kitchen Sink	10/5/16 Outside Spigot
Volatile Organic Compounds (VOCs) (µg/L):																	
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45	1.3	1.67	1.48	1.34	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	***0.56*** ***J***	***0.25*** ***J***	***0.22*** ***J***	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Total Metals																	
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																	
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	1309	NA	NA	NA	NA	NA	NA	NA	NA	1688	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	1966	NA	NA	NA	NA	NA	NA	NA	NA	2349	NA

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3504 CTH CR														
				Original Potable Well														
Analyte	Units	ES	PAL	12/5/13 Outside Spigot	12/05/13 (DUP) Outside Spigot	1/6/14 Basement	01/06/14 (DUP) Basement	2/5/14 Basement	5/30/14 Basement	05/30/14 (DUP) Basement	8/25/14 Basement	08/25/14 (DUP) Basement	11/18/14 Basement	11/18/14 (DUP) Basement	2/23/15 Basement	10/14/15 Basement	10/20/15	3/31/16 Basement
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	NA	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	NA	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	NA	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	NA	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	NA	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	NA	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.28	1.38	1.43	1.34	1.42	1.22	1.13 J	0.99 J	1.02 J	1.41	1.26	1.19 J	1.27 J	NA	0.76 J
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	NA	< 1.3
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	NA	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	NA	< 0.54
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	***0.23 J***	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	**0.18 J**	**0.17 J**	< 0.17	NA	< 0.17
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	413	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	698	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	3504 CTH CR					3618 CTH CR								
				Original Potable Well		Replacement Potable Well											
				03/31/16 (DUP) Basement	10/11/16 Basement	10/24/16 Basement	11/8/16 Basement	2/23/17 Basement	1/3/14 Kitchen Sink	5/29/14 Kitchen Sink	8/25/14 Kitchen Sink	11/10/14 Kitchen Sink	2/23/15 Kitchen Sink	10/14/15 Pressure Tank	3/30/16 Kitchen Sink	10/6/16 Kitchen Sink	5/30/17 Kitchen Sink
Volatile Organic Compounds (VOCs) (µg/L):																	
1,1-Dichloroethene	ug/l	7	0.7	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45
Benzene	ug/l	5	0.5	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27
Chloroform	ug/l	6	0.6	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	0.91 J	1.17 J	< 0.45	< 0.45	< 0.41	1.24	1.16 J	0.48 J	0.83 J	0.95 J	0.89 J	1.06 J	0.88 J	0.99 J
Methylene Chloride	ug/l	5	0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94
Toluene	ug/l	800	160	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67
trans-1,2-Dichloroethene	ug/l	100	20	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19
Total Metals																	
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																	
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	1380	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	2330	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3618 CTH CR		4002 Thunder Ridge Rd										
						Original Potable Well							Replacement Potable Well			
Analyte	Units	ES	PAL	10/25/17 Kitchen Sink	5/21/18 Kitchen Sink	1/3/14 Pressure Tank	8/25/14 Pressure Tank	10/13/15 Pressure Tank	10/13/15 (DUP) Pressure Tank	10/27/15 Pressure Tank	3/31/16 Pressure Tank	03/31/16 (DUP) Pressure Tank	5/23/16 Pressure Tank	6/2/16 Pressure Tank	6/23/16 Pressure Tank	10/5/16 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																
1,1-Dichloroethene	ug/l	7	0.7	< 0.46	< 0.42	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.45	< 0.25	< 0.41	< 0.41	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.17	< 0.22	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.27	< 0.26	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.96	< 0.26	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 1.3	< 0.54	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	0.95 J	1.23	1.67	1.29	1.3 J	1.14 J	1.26 J	0.68 J	1.03 J	< 0.45	< 0.45	< 0.45	< 0.45
Methylene Chloride	ug/l	5	0.5	< 0.94	< 1.32	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.67	< 0.19	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.34	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	< 0.19	< 0.2	< 0.18	< 0.18	< 0.17	***0.2 J***	**0.18 J**	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
Total Metals																
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1753	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2450	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4005 Thunder Ridge Rd														
				Original Potable Well									Replacement Potable Well					
Analyte	Units	ES	PAL	5/29/14 Outside Spigot	8/26/14 Outside Spigot	11/11/14 Outside Spigot	2/23/15 Outside Spigot	10/14/15 Outside Spigot	3/30/16 Outside Spigot	10/10/16 Outside Spigot	10/24/16 Outside Spigot	11/8/16 Outside Spigot	5/30/17 Pressure Tank	5/30/17 Pressure Tank	6/22/17 Pressure Tank	8/17/17 Pressure Tank	3/5/18 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.46	NA
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.45	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.17	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.27	NA
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.96	NA
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 1.3	NA
cis-1,2-Dichloroethene	ug/l	70	7	0.83 J	0.9 J	< 0.38	0.81 J	0.91 J	0.97 J	1.35 J	1.1 J	0.66 J	< 0.41	< 0.41	< 0.41	< 0.41	NA
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 0.94	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.67	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	NA
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	***0.29 J***	< 0.17	< 0.17	< 0.19	< 0.19	< 0.19	< 0.19	NA
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.3
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**317**
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.9
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	113
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**11.9**
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.67
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4240
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	43.5
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29000
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9**
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 7
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	***5.24***	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	1873	1573	NA	1696	1860
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	2706	2700	NA	2714	2700

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4010 Thunder Ridge Rd												
				Original Potable Well							Replacement Potable Well				
Analyte	Units	ES	PAL	5/28/14 Outside Spigot	8/26/14 Outside Spigot	2/24/15 Pressure Tank	10/20/15 Outside Spigot	3/31/16 Outside Spigot	10/7/16 Outside Spigot	10/24/16 Outside Spigot	5/31/17 Outside Spigot	5/31/17 Outside Spigot	6/22/17 Pressure Tank	8/17/17 Pressure Tank	3/5/18 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):															
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.46	NA
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.45	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.17	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.27	NA
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.96	NA
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 1.3	NA
cis-1,2-Dichloroethene	ug/l	70	7	1.37	1.18 J	1.43	1.27 J	1.47	1.27 J	1.42	< 0.41	< 0.41	< 0.41	< 0.41	NA
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 0.94	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.67	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	NA
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	***0.27 J***	***0.2 J***	< 0.19	< 0.19	< 0.19	< 0.19	NA
Total Metals															
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.8
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**262**
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.3
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	113
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.8
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10.9**
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.52
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4890
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68.4
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28200
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10.2**
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	25.2
Dissolved Metals															
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	***8.72***	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)															
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	1588	1576	NA	1732	1888
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	2658	2652	NA	2702	2630

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4027 Thunder Ridge Rd											
Analyte	**Units**	**ES**	**PAL**	**5/29/14 Outside Spigot**	**11/11/14 Outside Spigot**	**11/11/14 (DUP) Outside Spigot**	**2/24/15 Pressure Tank**	**10/13/15 Pressure Tank**	**3/31/16 Pressure Tank**	**10/6/16 Pressure Tank**	**10/06/16 (DUP) Pressure Tank**	**5/30/17 Pressure Tank**	**10/25/17 Pressure Tank**	**5/21/18 Pressure Tank**	**5/31/18 Pressure Tank**
Volatile Organic Compounds (VOCs) (µg/L):															
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.42
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.25
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.22
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.26
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.59 J	0.6 J	0.53 J	0.48 J	0.67 J	0.71 J	0.96 J	0.77 J	0.87 J	1.08 J	1.32	1 J
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 1.32
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.19
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.34
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	***0.28 J***	< 0.2
Total Metals															
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals															
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)															
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	4101 Thunder Ridge Rd 8/26/14 Outside Spigot	11/17/14 Outside Spigot	3/11/15 Pressure Tank	10/14/15 Outside Spigot	3/30/16 Outside Spigot	11/8/16 Outside Spigot	5/30/17 Outside Spigot	5/30/17 Outside Spigot	5/30/17 Outside Spigot	10/25/17 Outside Spigot	5/21/18 Outside Spigot
Volatile Organic Compounds (VOCs) (µg/L):														
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.46	< 0.42
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.45	< 0.25
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.17	< 0.22
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.27	< 0.26
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.73 J	0.63 J	0.76 J	0.87 J	0.71 J	1.02 J	0.73 J	0.7 J	0.68 J	0.84 J	1.32
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 0.94	< 1.32
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.67	< 0.19
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.34
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.19	< 0.19	< 0.2
Total Metals														
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)														
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	4111 Thunder Ridge Rd 8/25/14 Outside Spigot	11/17/14 Outside Spigot	2/23/15 Outside Spigot	10/13/15 Outside Spigot	3/30/16 Pressure Tank	10/10/16 Outside Spigot	5/30/17 Outside Spigot	10/25/17 Outside Spigot	10/25/17 (DUP) Outside Spigot	5/21/18 Pressure Tank	6/5/18 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):														
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.42	< 0.42
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.25	< 0.25
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.22	< 0.22
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.26	< 0.26
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.26	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 0.54	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.41 J	< 0.38	< 0.45	< 0.45	< 0.45	0.56 J	0.56 J	0.65 J	0.6 J	1.05 J	0.55 J
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 1.32	< 1.32
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.19	< 0.19
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.34	< 0.34
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.19	***0.21 J***	< 0.2
Total Metals														
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)														
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	3617(3621) Viebahn St (Well Abandoned, City Water Provided)						3701 Viebahn St (Original Potable Well (City Water Provided Dec 2016))						
				11/7/14 Pressure Tank	11/19/14 Pressure Tank	2/24/15 Pressure Tank	02/24/15 (DUP) Pressure Tank	10/13/15 Pressure Tank	3/30/16 Pressure Tank	10/29/14 Pressure Tank	11/7/14 Pressure Tank	11/07/14 (DUP) Pressure Tank	2/23/15 Pressure Tank	02/23/15 (DUP) Pressure Tank	10/14/15 Pressure Tank	10/14/15 (DUP) Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.54	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.54	< 0.54	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.13 J	1.12 J	0.92 J	0.87 J	1.3 J	1.12 J	1.23	1.18 J	1.29	1.31 J	1.09 J	1.55	1.48
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	**1.5 J**	**1.17 J**	**1.12 J**	< 1.3	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	***0.48 J***	***0.4 J***	< 0.17	**0.18 J**	***0.23 J***	< 0.17	***0.29 J***	***0.32 J***	***0.49 J***	***0.31 J***	***0.33 J***	***0.34 J***	***0.37 J***
Total Metals																
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3815 Viebahn St					3817 Viebahn St								
				Original Potable Well (City Water Provided Dec 2016)													
Analyte	Units	ES	PAL	11/7/14 Pressure Tank	11/19/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	10/13/15 (DUP) Pressure Tank	10/29/14 Outside Spigot	11/7/14 Outside Spigot	2/24/15 Pressure Tank	10/20/15 Outside Spigot	3/31/16 Outside Spigot	10/6/16 Outside Spigot	5/30/17 Outside Spigot	10/25/17 Outside Spigot	5/21/18 Outside Spigot
Volatile Organic Compounds (VOCs) (µg/L):																	
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.74 J	0.94 J	0.9 J	1 J	1.12 J	0.4 J	< 0.38	< 0.45	0.49 J	< 0.45	0.47 J	0.5 J	0.55 J	0.7 J
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34
Vinyl chloride	ug/l	0.2	0.02	***0.33 J***	***0.31 J***	***0.25 J***	***0.2 J***	***0.32 J***	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2
Total Metals																	
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																	
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES	PAL	4025 Viebahn St Original Potable Well (City Water Provided Dec 2016) 10/29/14 Pressure Tank	4025 Viebahn St Original Potable Well (City Water Provided Dec 2016) 11/7/14 Pressure Tank	4025 Viebahn St Original Potable Well (City Water Provided Dec 2016) 2/24/15 Pressure Tank	4025 Viebahn St Original Potable Well (City Water Provided Dec 2016) 10/13/15 Pressure Tank	4101 Viebahn St 4101 Viebahn St (City Water Provided 2016) 10/29/14 Pressure Tank	4101 Viebahn St 4101 Viebahn St (City Water Provided 2016) 11/7/14 Pressure Tank	4101 Viebahn St 4101 Viebahn St (City Water Provided 2016) 2/24/15 Pressure Tank	4101 Viebahn St 4101 Viebahn St (City Water Provided 2016) 10/14/15 Pressure Tank	3027 Orchard Ln 2/5/14 Pressure Tank	3027 Orchard Ln 6/4/14 Pressure Tank	3027 Orchard Ln 8/28/14 Pressure Tank	3027 Orchard Ln 11/11/14 Pressure Tank	3027 Orchard Ln 3/11/15 Pressure Tank	3027 Orchard Ln 10/14/15 Pressure Tank	3027 Orchard Ln 3/31/16 Pressure Tank
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.4	< 0.4	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.41	< 0.41	< 0.54	< 0.48	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.24	< 0.24	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.24	< 0.24	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.28	< 0.28	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 0.81	< 0.81	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.38	1.46	1.11 J	1.85	1.48	1.13 J	1.24 J	1.59	0.47 J	0.39 J	0.49 J	< 0.38	< 0.45	0.59 J	< 0.45
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 0.5	< 0.5	< 1.3	< 1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Toluene	ug/l	800	160	0.95 J	< 0.69	< 0.44	< 0.44	< 0.69	< 0.69	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.35	< 0.35	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	***0.34 J***	***0.31 J***	***0.32 J***	***0.44 J***	***0.38 J***	***0.39 J***	***0.43 J***	***0.54***	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3027 Orchard Ln				3911 Black Hawk Ct					3921 Black Hawk Ct					
Analyte	**Units**	**ES**	**PAL**	**10/6/16 Pressure Tank**	**5/31/17 Pressure Tank**	**10/31/17 Pressure Tank**	**5/31/18 Pressure Tank**	**7/8/15 Spigot**	**10/6/16 Pressure Tank**	**5/31/17 Pressure Tank**	**10/30/17 Pressure Tank**	**5/21/18 Pressure Tank**	**2/4/14 Pressure Tank**	**6/2/14 Pressure Tank**	**8/26/14 Pressure Tank**	**11/10/14 Pressure Tank**	**2/24/15 Pressure Tank**	**10/14/15 Pressure Tank**
Volatile Organic Compounds (VOCs) (µg/L):																		
1,1-Dichloroethene	ug/l	7	0.7	< 0.65	< 0.46	< 0.46	< 0.42	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65
1,2-Dichloroethane	ug/l	5	0.5	< 0.48	< 0.45	< 0.45	< 0.25	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48
Benzene	ug/l	5	0.5	< 0.44	< 0.17	< 0.17	< 0.22	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	ug/l	100	20	< 0.46	< 0.27	< 0.27	< 0.26	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46
Chloroform	ug/l	6	0.6	< 0.43	< 0.96	< 0.96	< 0.26	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 1.9	< 1.3	< 1.3	< 0.54	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	0.46 J	0.54 J	< 0.41	< 0.37	< 0.45	0.59 J	< 0.41	< 0.41	0.58 J	0.87 J	0.97 J	1.14 J	0.65 J	0.93 J	1.04 J
Methylene Chloride	ug/l	5	0.5	< 1.3	< 0.94	< 0.94	< 1.32	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3
Toluene	ug/l	800	160	< 0.44	< 0.67	< 0.67	< 0.19	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44
trans-1,2-Dichloroethene	ug/l	100	20	< 0.54	< 0.35	< 0.35	< 0.34	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54
Vinyl chloride	ug/l	0.2	0.02	< 0.17	< 0.19	< 0.19	< 0.2	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17
Total Metals																		
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																		
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3921 Black Hawk Ct					2918 S 26TH St							3008 S 26TH St		2201 Elm Road	
									Original Potable Well			Replacement Potable Well							
Analyte	Units	ES	PAL	3/31/16 Pressure Tank	10/5/16 Pressure Tank	5/30/17 Pressure Tank	10/25/17 Pressure Tank	5/21/18 Pressure Tank	8/15/2017 [4] Exterior Spigot	9/5/17 Pressure Tank	09/05/17 (DUP) Pressure Tank	12/11/17 Pressure Tank	12/11/17 (DUP) Pressure Tank	3/5/18 Pressure Tank	3/5/18 Pressure Tank	11/08/17 [3] Spigot W Side	12/14/17 [3] Basement Tap	12/19/17 [3] Basement Tap	2/14/18 [3] Basement Tap
Volatile Organic Compounds (VOCs) (µg/L):																			
1,1-Dichloroethene	ug/l	7	0.7	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.5	< 0.46	< 0.46	< 0.46	< 0.46	NA	< 0.42	< 0.5	< 0.5	< 0.5	< 0.22
1,2-Dichloroethane	ug/l	5	0.5	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.5	< 0.45	< 0.45	< 0.45	< 0.45	NA	< 0.25	< 0.5	< 0.5	< 0.5	< 0.16
Benzene	ug/l	5	0.5	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.3	< 0.17	< 0.17	< 0.17	< 0.17	NA	< 0.22	< 0.3	< 0.3	< 0.3	< 0.1
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	< 0.3	NA	NA	NA	NA	NA	NA	< 0.3	< 0.3	< 0.3	< 1
Chlorobenzene	ug/l	100	20	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.25	< 0.27	< 0.27	< 0.27	< 0.27	NA	< 0.26	< 0.25	< 0.25	< 0.25	< 0.27
Chloroform	ug/l	6	0.6	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.25	< 0.96	< 0.96	< 0.96	< 0.96	NA	< 0.26	< 0.25	< 0.25	< 0.25	< 0.1
Chloromethane	ug/l	30	3	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 1	< 1.3	< 1.3	< 1.3	< 1.3	NA	< 0.54	< 1	< 1	< 1	< 0.89
cis-1,2-Dichloroethene	ug/l	70	7	0.71 J	0.63 J	0.57 J	0.51 J	0.95 J	1.1	0.85 J	0.75 J	< 0.41	< 0.41	NA	< 0.37	1	0.85	0.51	0.55
Methylene Chloride	ug/l	5	0.5	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 0.5	< 0.94	< 0.94	< 0.94	< 0.94	NA	< 1.32	< 0.5	< 0.5	< 0.5	< 0.15
Toluene	ug/l	800	160	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.25	< 0.67	< 0.67	< 0.67	< 0.67	NA	< 0.19	< 0.25	< 0.25	< 0.25	< 0.29
trans-1,2-Dichloroethene	ug/l	100	20	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.5	< 0.35	< 0.35	< 0.35	< 0.35	NA	< 0.34	< 0.5	< 0.5	< 0.5	< 0.22
Vinyl chloride	ug/l	0.2	0.02	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	***0.21 J***	***0.26 J***	***0.24 J***	< 0.19	< 0.19	NA	< 0.2	***0.47***	***0.55***	< 0.2	***0.2***
Total Metals																			
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.9	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**280**	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.8	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.9	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**12.1**	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.94	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3110	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	123	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30600	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9.09**	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.9	NA	NA	NA	NA	NA
Dissolved Metals																			
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous (mg/L)																			
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	1898	NA	1853	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	3007	NA	2980	NA	NA	NA	NA	NA

TABLE 1

SUMMARY OF CONTAMINATES DETECTED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

NOTES:

(1) Enforcement Standard from NR140, February 2017.
(2) Preventive Action Limit from NR140, February 2017.
(3) Sample Collected by the WDNR.
(4) Sample Collected by the Property Owner.
DUP - Field duplicate sample
NL - ES or PAL not listed in NR140.
NA - Not analyzed.
J - Compound was detected at a concentration between the limit of detection (LOD) and the limit of quantitation (LOQ).

Bold indicates a PAL exceedance.
Bold and underlining indicates an ES exceedance.

Table 2
SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
(Table 2 provided on CD copy of report)

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3114 Hecker Rd			3121 Hecker Rd			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/8/13 Outside Spigot**	**5/28/14 Outside Spigot**	**10/22/13 Basement**	**11/7/13 Basement**	**5/28/14 Basement**	**10/14/15 Basement**
Volatile Organic Compounds (VOCs):										
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43
Chloromethane	ug/l	30	3	1.36 J	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3114 Hecker Rd			3121 Hecker Rd			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/8/13 Outside Spigot**	**5/28/14 Outside Spigot**	**10/22/13 Basement**	**11/7/13 Basement**	**5/28/14 Basement**	**10/14/15 Basement**
Polycarbonated Biphenyls (PCBs):										
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA
Total Metals:										
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:										
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:										
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:										
Conductivity	uS/cm	NL	NL	617	443	502	877	635	689	785
Dissolved Oxygen	ppm	NL	NL	4.11	150.31	1.3	4.22	8.42	2.2	2.34
ORP	mV	NL	NL	20.2	90.5	70	90.1	95.7	38	-65.8
pH	SU	NL	NL	7.84	8.22	7.85	6.01	7.55	7.55	7.37
Temperature	deg C	NL	NL	10.54	10.09	10.5	9.72	10.25	10.4	11.73

AECOM

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3303 Hecker Rd													
				Original Potable Well								Replacement Potable Well					
Analyte	Units	ES[1]	PAL[2]	10/23/13 Basement	11/7/13 Basement	6/3/14 Basement	06/03/14 (DUP) Basement	11/17/14 Basement	2/23/15 Basement	10/13/15 Basement	3/30/16 Basement	8/8/16 Basement	9/26/16 Basement	10/24/16 Basement	10/24/16 Basement-Vial 2	10/24/16 Basement-Vial 3	11/8/16 Basement
Volatile Organic Compounds (VOCs):																	
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.8	< 1	2.6 J	< 1
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	0.68 J	0.68 J	< 0.38	< 0.45	1.94	2.53	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	**0.44 J**	**0.51 J**	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3303 Hecker Rd													
				Original Potable Well								Replacement Potable Well					
Analyte	Units	ES[1]	PAL[2]	10/23/13 Basement	11/7/13 Basement	6/3/14 Basement	06/03/14 (DUP) Basement	11/17/14 Basement	2/23/15 Basement	10/13/15 Basement	3/30/16 Basement	8/8/16 Basement	9/26/16 Basement	10/24/16 Basement	10/24/16 Basement-Vial 2	10/24/16 Basement-Vial 3	11/8/16 Basement
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1374	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**28.9**	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2003	NA	NA	NA
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	585	538	538	538	587	618	531	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	4.22	2.41	2.41	2.41	6.84	7.1	6.69	NA	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	62	76.4	76.4	76.4	9.2	-131.9	-58.2	NA	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	8.13	7.32	7.32	7.32	7.85	8.04	7.43	NA	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	9.69	10.31	10.31	10.31	8.83	7.31	11.19	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Analyte	Units	ES[1]	PAL[2]	3320 Hecker Rd				
				10/22/13 Outside Spigot	11/7/13 Outside Spigot	5/28/14 Outside Spigot	3/30/16 Outside Spigot	10/25/17 Outside Spigot
Volatile Organic Compounds (VOCs):								
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.48	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.52	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.48	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 1.1	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 2.7	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 1.7	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 1.4	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.63	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.46	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.48	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.43	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.5	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.52	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.42	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.49	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 3.1	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.4	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.63	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.48	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.46	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.46	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.51	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.65	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.45	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.87	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.71	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 2.2	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.44	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.82	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 1.1	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.6	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 1	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.77	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.9	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 1.1	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 1.2	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 1.1	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.49	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.47	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.87	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3320 Hecker Rd				
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/7/13 Outside Spigot**	**5/28/14 Outside Spigot**	**3/30/16 Outside Spigot**	**10/25/17 Outside Spigot**
Polycarbonated Biphenyls (PCBs):								
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA
Total Metals:								
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA
Dissolved Metals:								
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA
Total Dissolved Solids:								
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA
Field Screening Measurements:								
Conductivity	uS/cm	NL	NL	598	455	477	NA	NA
Dissolved Oxygen	ppm	NL	NL	4.03	6.51	0.89	NA	NA
ORP	mV	NL	NL	56	86.7	50	NA	NA
pH	SU	NL	NL	7.66	7.99	7.78	NA	NA
Temperature	deg C	NL	NL	10.41	9.78	11	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3327 Hecker Rd												
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/23/13 Outside Spigot**	**11/7/13 Outside Spigot**	**5/28/14 Outside Spigot**	**8/25/14 Outside Spigot**	**11/10/14 Outside Spigot**	**2/23/15 Kitchen Sink**	**10/14/15 Outside Spigot**	**3/31/16 Kitchen Sink**	**10/5/16 Outside Spigot**	**5/30/17 Outside Spigot**	**10/25/17 Outside Spigot**	**5/21/18 Outside Spigot**	**05/21/18 (DUP) Outside Spigot**
Volatile Organic Compounds (VOCs):																
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35	< 0.35
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3	< 0.3
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42	< 0.42
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36	< 0.36
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.42
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71	< 1.71
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15	< 1.15
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8	< 0.8
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96	< 2.96
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86	< 0.86
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.25
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44	< 0.44
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63	< 0.63
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85	< 0.85
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7	< 0.7
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31	< 0.31
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26	< 0.26
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.22
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44	< 0.44
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33	< 0.33
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45	< 0.45
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31	< 0.31
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.26
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61	< 0.61
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	**11**	**11.6**	6.4	6.9	5.6	4.3	4.2	3.2	3.3	2.38	4	4.5	4.2
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26	< 0.26
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32	< 0.32
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26	< 0.26
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34	< 1.34
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21	< 0.21
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78	< 0.78
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43	< 0.43
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 1.32
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28	< 0.28
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1	< 2.1
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71	< 0.71
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61	< 0.61
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29	< 0.29
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24	< 0.24
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79	< 0.79
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25	< 0.25
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38	< 0.38
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.19
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.34
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32	< 0.32
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3	< 0.3
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA	NA

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3327 Hecker Rd												
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/23/13 Outside Spigot**	**11/7/13 Outside Spigot**	**5/28/14 Outside Spigot**	**8/25/14 Outside Spigot**	**11/10/14 Outside Spigot**	**2/23/15 Kitchen Sink**	**10/14/15 Outside Spigot**	**3/31/16 Kitchen Sink**	**10/5/16 Outside Spigot**	**5/30/17 Outside Spigot**	**10/25/17 Outside Spigot**	**5/21/18 Outside Spigot**	**05/21/18 (DUP) Outside Spigot**
Polycarbonated Biphenyls (PCBs):																
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																
Conductivity	uS/cm	NL	NL	620	478	528	603	596	614	590	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	3.22	6.69	1.11	1.89	1.23	4.15	4.78	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	53.7	93.9	71	146	-14.5	-144.2	16.5	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	8.38	7.82	7.81	7.72	8.04	8.13	7.38	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	10.96	8.62	10.2	12.6	10.35	6.16	11.34	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3461(3417) Hecker Rd												
Analyte	Units	ES[1]	PAL[2]	10/24/13 Inside Sink	11/12/13 Inside Sink	5/30/14 Inside Sink	8/26/14 Inside Sink	11/10/14 Inside Sink	2/24/15 Inside Sink	10/13/15 Inside Sink	3/30/16 Inside Sink	03/30/16 (DUP) Inside Sink	10/06/16 (DUP) Inside Sink	5/31/17 Inside Sink	10/25/17 Inside Sink	5/21/18 Inside Sink
Volatile Organic Compounds (VOCs):																
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	0.32 J	< 0.27	< 0.26
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	2.58	2.15	2.12	1.79	1.49	1.59	1.6	1.66	1.74	1.51	0.55 J	1.35	1.87
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3461(3417) Hecker Rd												
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/24/13 Inside Sink**	**11/12/13 Inside Sink**	**5/30/14 Inside Sink**	**8/26/14 Inside Sink**	**11/10/14 Inside Sink**	**2/24/15 Inside Sink**	**10/13/15 Inside Sink**	**3/30/16 Inside Sink**	**03/30/16 (DUP) Inside Sink**	**10/06/16 (DUP) Inside Sink**	**5/31/17 Inside Sink**	**10/25/17 Inside Sink**	**5/21/18 Inside Sink**
Polycarbonated Biphenyls (PCBs):																
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																
Conductivity	uS/cm	NL	NL	723	554	562	721	733	771	748	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	4.73	17.93	1.53	0.95	2.47	4.12	3.49	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	69	91.7	146	237	-112.9	-164.9	-91.6	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.55	7.27	7.45	7.89	7.81	7.83	7.94	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	10.5	9.43	11.9	14.1	10.72	7.91	8.25	NA	NA	NA	NA	NA	NA

AECOM

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3515 Hecker Rd										
				Original Potable Well						Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	10/22/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Inside Kitchen	11/22/13 Outside Spigot	5/28/14 Outside Spigot	8/28/14 Outside Spigot	9/29/14 Outside Spigot	11/4/14 Outside Spigot	2/23/15 Pressure Tank	10/14/15 Pressure Tank	10/5/16 Pressure Tank
Volatile Organic Compounds (VOCs):														
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	NA	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	NA	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	NA	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	NA	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	NA	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	NA	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	NA	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	NA	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	NA	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	NA	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	NA	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	NA	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	NA	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	NA	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	NA	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	1.02 J	< 0.81	< 0.81	NA	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	**7.4**	**7.4**	**7.2**	NA	**10**	**7.8**	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	NA	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	NA	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	NA	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	NA	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	NA	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	NA	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	NA	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	NA	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	NA	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	NA	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	NA	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	NA	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	NA	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**0.22** J	**0.24** J	**0.24** J	NA	**0.47** J	**0.28** J	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	NA	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3515 Hecker Rd											
				Original Potable Well						Replacement Potable Well					
Analyte	Units	ES[1]	PAL[2]	10/22/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Inside Kitchen	11/22/13 Outside Spigot	5/28/14 Outside Spigot	8/28/14 Outside Spigot	9/29/14 Outside Spigot	11/4/14 Outside Spigot	2/23/15 Pressure Tank	10/14/15 Pressure Tank	10/5/16 Pressure Tank
Polycarbonated Biphenyls (PCBs):														
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	< 0.02	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	< 0.024	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	< 0.021	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	< 0.024	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	< 0.014	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	< 0.018	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	< 0.015	NA	NA	NA	NA	NA	NA	NA
Total Metals:														
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	1504	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.22**	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:														
Arsenic	ug/l	10	1	NA	NA	NA	**1.9**	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	150	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	< 0.16	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	< 0.54	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	0.34 J	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	0.061 J	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	< 0.38	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	< 0.31	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:														
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	2156	NA
Field Screening Measurements:														
Conductivity	uS/cm	NL	NL	775	616	634	NA	694	783	NA	NA	2219	2127	NA
Dissolved Oxygen	ppm	NL	NL	3.81	5.46	5.75	NA	2.13	1.73	NA	NA	5.19	1.85	NA
ORP	mV	NL	NL	20.1	91.8	74.8	NA	92	231	NA	NA	-154.6	-51	NA
pH	SU	NL	NL	8.02	7.44	7.77	NA	7.75	7.97	NA	NA	7.81	7.16	NA
Temperature	deg C	NL	NL	9.56	10.48	10.1	NA	10.6	11.7	NA	NA	7.19	11.73	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3518 Hecker Rd												
				Original Potable Well			Replacement Potable Well									
Analyte	Units	ES[1]	PAL[2]	10/23/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Outside Spigot	3/11/14 Outside Spigot	03/11/14 (DUP) Outside Spigot	3/31/14 Outside Spigot	4/22/14 Outside Spigot	05/29/14 (DUP) Outside Spigot	8/25/14 Outside Spigot	11/10/14 Outside Spigot	2/23/15 Pressure Tank	10/14/15 Pressure Tank	10/6/16 Pressure Tank
Volatile Organic Compounds (VOCs):																
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 3.3	< 3.3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 3.3	< 3.3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 4.5	< 4.5	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 3.4	< 3.4	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 3	< 3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	**1.62**	< 4	< 4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 18	< 18	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 9.8	< 9.8	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 22	< 22	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 8.8	< 8.8	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 4.4	< 4.4	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 3.6	< 3.6	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	0.42 J	< 4.1	< 4.1	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 3.2	< 3.2	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 14	< 14	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 2.8	< 2.8	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 3.3	< 3.3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 3	< 3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 3.6	< 3.6	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 2.1	< 2.1	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 2.1	< 2.1	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	**1.74**	< 2.4	< 2.4	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 3.2	< 3.2	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 3.7	< 3.7	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 3.5	< 3.5	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 3.3	< 3.3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 2.4	< 2.4	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 6.3	< 6.3	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 2.8	< 2.8	< 0.28	< 0.28	0.45 J	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 8.1	< 8.1	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	**510**	**530**	**510**	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 2.2	< 2.2	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 4.4	< 4.4	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 5.5	< 5.5	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 15	< 15	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 2.3	< 2.3	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 3	< 3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 6.9	< 6.9	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 2.3	< 2.3	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 17	< 17	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 3.5	< 3.5	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 2.5	< 2.5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 6.3	< 6.3	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 3.1	< 3.1	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 3.3	< 3.3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 3.6	< 3.6	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 3.3	< 3.3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 6.9	< 6.9	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 22	< 22	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	NA	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	5.5	< 3.5	< 3.5	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 3.3	< 3.3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 7.1	< 7.1	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**102**	**92**	**86**	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 6.9	< 6.9	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	NA	< 2.2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3518 Hecker Rd												
				Original Potable Well			Replacement Potable Well									
Analyte	Units	ES[1]	PAL[2]	10/23/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Outside Spigot	3/11/14 Outside Spigot	03/11/14 (DUP) Outside Spigot	3/31/14 Outside Spigot	4/22/14 Outside Spigot	05/29/14 (DUP) Outside Spigot	8/25/14 Outside Spigot	11/10/14 Outside Spigot	2/23/15 Pressure Tank	10/14/15 Pressure Tank	10/6/16 Pressure Tank
Polycarbonated Biphenyls (PCBs):																
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1448	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**7.01**	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2064	NA
Field Screening Measurements:																
Conductivity	uS/cm	NL	NL	744	554	554	NA	NA	NA	NA	1571	2080	1942	1948	NA	NA
Dissolved Oxygen	ppm	NL	NL	3.21	3.85	3.32	NA	NA	NA	NA	3.87	1.22	1.93	4.83	NA	NA
ORP	mV	NL	NL	74.1	93.1	92	NA	NA	NA	NA	-190	178	-109.4	-123.8	NA	NA
pH	SU	NL	NL	6.16	7.4	7.48	NA	NA	NA	NA	7.37	7.9	7.74	8	NA	NA
Temperature	deg C	NL	NL	9.89	10.58	9.36	NA	NA	NA	NA	11.2	12.5	10.11	7.33	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3609 Hecker Rd													
				Original Potable Well									Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	10/22/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Inside Kitchen	11/22/13 Outside Spigot	5/28/14 Ouside Spigot	05/28/14 (DUP) Ouside Spigot	7/11/14 Pressure Tank	8/25/14 Pressure Tank	08/25/14 (DUP) Pressure Tank	9/29/14 Pressure Tank	11/4/14 Pressure Tank	2/24/15 Pressure Tank	10/13/15 Pressure Tank	10/5/16 Pressure Tank
Volatile Organic Compounds (VOCs):																	
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	NA	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	NA	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	NA	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	NA	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	NA	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	NA	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	NA	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	NA	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	NA	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	NA	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	NA	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	NA	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	NA	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	NA	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	NA	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	NA	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	NA	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	NA	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	NA	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	**45**	**46**	**45**	NA	**49**	**49**	**51**	**35**	**36**	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	NA	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	NA	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	NA	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	NA	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	NA	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	NA	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	**0.82 J**	< 0.5	< 0.5	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	NA	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	NA	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	NA	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	NA	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	NA	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	NA	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	0.39 J	NA	0.42 J	0.37 J	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	NA	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**1**	**1.02**	**1.09**	NA	**7.4**	**7.6**	**8.6**	**4.6**	**5.2**	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	NA	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3609 Hecker Rd													
				Original Potable Well									Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	10/22/13 Outside Spigot	11/7/13 Inside Kitchen	11/7/13 Inside Kitchen	11/22/13 Outside Spigot	5/28/14 Ouside Spigot	05/28/14 (DUP) Ouside Spigot	7/11/14 Pressure Tank	8/25/14 Pressure Tank	08/25/14 (DUP) Pressure Tank	9/29/14 Pressure Tank	11/4/14 Pressure Tank	2/24/15 Pressure Tank	10/13/15 Pressure Tank	10/5/16 Pressure Tank
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	< 0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	< 0.024	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	< 0.021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	< 0.024	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	< 0.014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	< 0.018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	< 0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1591	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5.08**	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	0.32 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	< 0.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	< 0.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	0.56 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	< 0.049	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	< 0.38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	< 0.31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2264	NA
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	754	614	558	NA	634	634	983	675	675	NA	2248	2203	NA	NA
Dissolved Oxygen	ppm	NL	NL	4.02	4.14	3.9	NA	1.43	1.43	2.11	2.79	2.79	NA	3.42	7.78	NA	NA
ORP	mV	NL	NL	73	91.6	95.4	NA	60	60	131	199	199	NA	-141.9	-118.4	NA	NA
pH	SU	NL	NL	7.56	7.42	7.28	NA	7.5	7.5	7.91	7.7	7.7	NA	7.77	7.72	NA	NA
Temperature	deg C	NL	NL	10.53	12.84	9.99	NA	11.1	11.1	15.2	12.4	12.4	NA	10.69	7.01	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3625 Hecker Rd					3627 Hecker Rd			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/7/13 Outside Spigot**	**5/28/14 Outside Spigot**	**10/5/16 Outside Spigot**	**10/05/16 (DUP) Outside Spigot**	**10/23/13 Outside Spigot**	**11/7/13 Outside Spigot**	**5/29/14 Outside Spigot**	**5/30/17 Outside Spigot**
Volatile Organic Compounds (VOCs):												
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.33	< 0.33	< 0.33	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.33	< 0.33	< 0.33	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.45	< 0.45	< 0.45	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.34	< 0.34	< 0.34	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 0.3	< 0.3	< 0.3	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 1.8	< 1.8	< 1.8	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 0.98	< 0.98	< 0.98	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 2.2	< 2.2	< 2.2	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 0.88	< 0.88	< 0.88	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.44	< 0.44	< 0.44	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.36	< 0.36	< 0.36	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.32	< 0.32	< 0.32	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.4	< 1.4	< 1.4	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.28	< 0.28	< 0.28	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.33	< 0.33	< 0.33	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.3	< 0.3	< 0.3	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 0.36	< 0.36	< 0.36	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.21	< 0.21	< 0.21	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.21	< 0.21	< 0.21	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.32	< 0.32	< 0.32	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.37	< 0.37	< 0.37	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.35	< 0.35	< 0.35	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.51	< 0.51	< 0.33	< 0.33	< 0.33	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.63	< 0.63	< 0.63	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.96
Chloromethane	ug/l	30	3	0.82 J	< 0.81	< 0.81	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.45	< 0.45	< 0.38	< 0.38	< 0.38	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.44	< 0.44	< 0.44	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.55	< 0.55	< 0.55	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 1.5	< 1.5	< 1.5	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.23	< 0.23	< 0.23	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.3	< 0.3	< 0.3	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 0.69	< 0.69	< 0.69	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 0.5	< 0.5	< 0.5	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 0.23	< 0.23	< 0.23	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.7	< 1.7	< 1.7	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 1	< 1	< 0.35	< 0.35	< 0.35	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.25	< 0.25	< 0.25	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.63	< 0.63	< 0.63	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 0.31	< 0.31	< 0.31	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 0.33	< 0.33	< 0.33	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 0.36	< 0.36	< 0.36	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.49	< 0.49	< 0.33	< 0.33	< 0.33	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	NA	< 1.6	< 1.6	< 2.2	< 2.2	< 2.2	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.33	< 0.33	< 0.33	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.71	< 0.71	< 0.71	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.18	< 0.18	< 0.18	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	NA	< 2.2	< 2.2	< 0.69	< 0.69	< 0.69	< 1.56

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3625 Hecker Rd					3627 Hecker Rd			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/7/13 Outside Spigot**	**5/28/14 Outside Spigot**	**10/5/16 Outside Spigot**	**10/05/16 (DUP) Outside Spigot**	**10/23/13 Outside Spigot**	**11/7/13 Outside Spigot**	**5/29/14 Outside Spigot**	**5/30/17 Outside Spigot**
Polycarbonated Biphenyls (PCBs):												
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:												
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:												
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:												
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:												
Conductivity	uS/cm	NL	NL	782	552	NA	NA	NA	707	531	576	NA
Dissolved Oxygen	ppm	NL	NL	4.54	5.31	NA	NA	NA	4.53	4.69	2.53	NA
ORP	mV	NL	NL	68.4	85.9	NA	NA	NA	45.1	91.3	137	NA
pH	SU	NL	NL	7.38	7.77	NA	NA	NA	7.98	7.75	7.18	NA
Temperature	deg C	NL	NL	11.04	10.92	NA	NA	NA	10.13	9.63	11.5	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3702 Hecker Rd												
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/12/13 Outside Spigot**	**6/3/14 Outside Spigot**	**8/25/14 Outside Spigot**	**11/13/14 Outside Spigot**	**10/14/15 Outside Spigot**	**10/14/15 (DUP) Outside Spigot**	**3/31/16 Pressure Tank**	**10/11/16 Pressure Tank**	**5/30/17 Outside Spigot**	**10/25/17 Outside Spigot**	**5/21/18 Outside Spigot**
Volatile Organic Compounds (VOCs):																
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.51	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.71 J	0.61 J	< 0.38	< 0.38	< 0.38	0.48 J	0.73 J	< 0.45	1.04 J	0.51 J	< 0.41	< 0.37
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.49	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3702 Hecker Rd											
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/12/13 Outside Spigot**	**6/3/14 Outside Spigot**	**8/25/14 Outside Spigot**	**11/13/14 Outside Spigot**	**10/14/15 Outside Spigot**	**10/14/15 (DUP) Outside Spigot**	**3/31/16 Pressure Tank**	**10/11/16 Pressure Tank**	**5/30/17 Outside Spigot**	**10/25/17 Outside Spigot**	**5/21/18 Outside Spigot**
Polycarbonated Biphenyls (PCBs):															
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:															
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:															
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:															
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:															
Conductivity	uS/cm	NL	NL	757	522	552	657	657	635	635	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	4.73	8.16	4.6	3.77	3.77	6.25	6.25	NA	NA	NA	NA	NA
ORP	mV	NL	NL	52.9	100.4	158	245	245	-91.9	-91.9	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.83	8.28	7.62	7.87	7.87	7.59	7.59	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	9.82	10.58	14	14.1	14.1	12.51	12.51	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3720 Hecker Rd				3710 Silver Creek Rd	3780 Silver Creek Rd	3802 Silver Creek Rd	3812 Silver Creek Rd		3902 Silver Creek Rd		4004 Silver Creek Rd		4156 Silver Creek Rd	
Analyte	Units	ES[1]	PAL[2]	10/22/13 Outside Spigot	11/12/13 Outside Spigot	6/2/14 Outside Spigot	3/31/16 Outside Spigot	5/31/17 Pressure Tank	5/30/17 Pressure Tank	5/30/17 Pressure Tank	5/28/14 Outside Spigot	1/14/16 Outside Spigot	11/18/14 Outside Spigot	10/10/16 Pressure Tank	11/18/14 Pressure Tank	10/13/15 Pressure Tank	5/28/14 Outside Spigot	3/30/16 Kitchen Sink
Volatile Organic Compounds (VOCs):																		
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.48	< 0.47	< 0.47	< 0.47	< 0.33	< 0.48	< 0.33	< 0.48	< 0.33	< 0.48	< 0.33	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35	< 0.35	< 0.35	< 0.33	< 0.84	< 0.33	< 0.84	< 0.33	< 0.84	< 0.33	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.52	< 0.69	< 0.69	< 0.69	< 0.45	< 0.52	< 0.45	< 0.52	< 0.45	< 0.52	< 0.45	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.48	< 0.65	< 0.65	< 0.65	< 0.34	< 0.48	< 0.34	< 0.48	< 0.34	< 0.48	< 0.34	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 1.1	< 0.42	< 0.42	< 0.42	< 0.3	< 1.1	< 0.3	< 1.1	< 0.3	< 1.1	< 0.3	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.46	< 0.46	< 0.46	< 0.4	< 0.65	< 0.4	< 0.65	< 0.4	< 0.65	< 0.4	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 2.7	< 0.83	< 0.83	< 0.83	< 1.8	< 2.7	< 1.8	< 2.7	< 1.8	< 2.7	< 1.8	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 1.7	< 1.29	< 1.29	< 1.29	< 0.98	< 1.7	< 0.98	< 1.7	< 0.98	< 1.7	< 0.98	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 1.14	< 1.14	< 2.2	< 1.6	< 2.2	< 1.6	< 2.2	< 1.6	< 2.2	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 1.4	< 1.88	< 1.88	< 1.88	< 0.88	< 1.4	< 0.88	< 1.4	< 0.88	< 1.4	< 0.88	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.63	< 0.34	< 0.34	< 0.34	< 0.44	< 0.63	< 0.44	< 0.63	< 0.44	< 0.63	< 0.44	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.46	< 0.34	< 0.34	< 0.34	< 0.36	< 0.46	< 0.36	< 0.46	< 0.36	< 0.46	< 0.36	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.48	< 0.45	< 0.45	< 0.45	< 0.41	< 0.48	< 0.41	< 0.48	< 0.41	< 0.48	< 0.41	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.43	< 0.39	< 0.39	< 0.39	< 0.32	< 0.43	< 0.32	< 0.43	< 0.32	< 0.43	< 0.32	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.5	< 0.91	< 0.91	< 0.91	< 1.4	< 1.5	< 1.4	< 1.5	< 1.4	< 1.5	< 1.4	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.52	< 0.45	< 0.45	< 0.45	< 0.28	< 0.52	< 0.28	< 0.52	< 0.28	< 0.52	< 0.28	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.42	< 0.49	< 0.49	< 0.49	< 0.33	< 0.42	< 0.33	< 0.42	< 0.33	< 0.42	< 0.33	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.49	< 0.42	< 0.42	< 0.42	< 0.3	< 0.49	< 0.3	< 0.49	< 0.3	< 0.49	< 0.3	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 3.1	NA	NA	NA	< 0.36	< 3.1	< 0.36	< 3.1	< 0.36	< 3.1	< 0.36	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.4	< 0.36	< 0.36	< 0.36	< 0.21	< 0.4	< 0.21	< 0.4	< 0.21	< 0.4	< 0.21	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.63	< 0.35	< 0.35	< 0.35	< 0.21	< 0.63	< 0.21	< 0.63	< 0.21	< 0.63	< 0.21	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.17	< 0.17	< 0.17	< 0.24	< 0.44	< 0.24	< 0.44	< 0.24	< 0.44	< 0.24	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.48	< 0.43	< 0.43	< 0.43	< 0.32	< 0.48	< 0.32	< 0.48	< 0.32	< 0.48	< 0.32	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.46	< 0.31	< 0.31	< 0.31	< 0.37	< 0.46	< 0.37	< 0.46	< 0.37	< 0.46	< 0.37	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.46	< 0.49	< 0.49	< 0.49	< 0.35	< 0.46	< 0.35	< 0.46	< 0.35	< 0.46	< 0.35	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.51	< 0.21	< 0.21	< 0.21	< 0.33	< 0.51	< 0.33	< 0.51	< 0.33	< 0.51	< 0.33	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.27	< 0.27	< 0.27	< 0.24	< 0.46	< 0.24	< 0.46	< 0.24	< 0.46	< 0.24	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.65	< 0.5	< 0.5	< 0.5	< 0.63	< 0.65	< 0.63	< 0.65	< 0.63	< 0.65	< 0.63	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.96	< 0.96	< 0.96	< 0.28	< 0.43	< 0.28	< 0.43	< 0.28	< 0.43	< 0.28	< 0.43
Chloromethane	ug/l	30	3	1.48 J	< 0.81	< 0.81	< 1.9	< 1.3	< 1.3	< 1.3	< 0.81	< 1.9	< 0.81	< 1.9	< 0.81	< 1.9	< 0.81	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.45	< 0.41	< 0.41	< 0.41	< 0.38	< 0.45	< 0.38	< 0.45	< 0.38	< 0.45	< 0.38	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	< 0.21	< 0.21	< 0.21	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.45	< 0.22	< 0.45	< 0.22	< 0.45	< 0.22	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.87	< 0.38	< 0.38	< 0.38	< 0.44	< 0.87	< 0.44	< 0.87	< 0.44	< 0.87	< 0.44	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.71	< 0.2	< 0.2	< 0.2	< 0.55	< 0.71	< 0.55	< 0.71	< 0.55	< 0.71	< 0.55	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 2.2	< 1.47	< 1.47	< 1.47	< 1.5	< 2.2	< 1.5	< 2.2	< 1.5	< 2.2	< 1.5	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.44	< 0.26	< 0.26	< 0.26	< 0.23	< 0.44	< 0.23	< 0.44	< 0.23	< 0.44	< 0.23	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.82	< 0.29	< 0.29	< 0.29	< 0.3	< 0.82	< 0.3	< 0.82	< 0.3	< 0.82	< 0.3	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 1.56	< 1.56	< 0.69	< 2.2	< 0.69	< 2.2	< 0.69	< 2.2	< 0.69	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 0.94	< 0.94	< 0.94	< 0.5	< 1.3	< 0.5	< 1.3	< 0.5	< 1.3	< 0.5	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 1.1	< 0.82	< 0.82	< 0.82	< 0.23	< 1.1	< 0.23	< 1.1	< 0.23	< 1.1	< 0.23	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.6	< 2.17	< 2.17	< 2.17	< 1.7	< 1.6	< 1.7	< 1.6	< 1.7	< 1.6	< 1.7	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 1	< 0.34	< 0.34	< 0.34	< 0.35	< 1	< 0.35	< 1	< 0.35	< 1	< 0.35	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.77	< 0.19	< 0.19	< 0.19	< 0.25	< 0.77	< 0.25	< 0.77	< 0.25	< 0.77	< 0.25	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.9	< 0.39	< 0.39	< 0.39	< 0.63	< 0.9	< 0.63	< 0.9	< 0.63	< 0.9	< 0.63	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 1.1	< 0.28	< 0.28	< 0.28	< 0.31	< 1.1	< 0.31	< 1.1	< 0.31	< 1.1	< 0.31	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 1.2	< 0.24	< 0.24	< 0.24	< 0.33	< 1.2	< 0.33	< 1.2	< 0.33	< 1.2	< 0.33	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 1.1	< 0.39	< 0.39	< 0.39	< 0.36	< 1.1	< 0.36	< 1.1	< 0.36	< 1.1	< 0.36	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.49	< 0.48	< 0.48	< 0.48	< 0.33	< 0.49	< 0.33	< 0.49	< 0.33	< 0.49	< 0.33	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.67	< 0.67	< 0.67	< 0.69	< 0.44	< 0.69	< 0.44	< 0.69	< 0.44	< 0.69	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 1.14	< 1.14	< 2.2	< 1.6	< 2.2	< 1.6	< 2.2	< 1.6	< 2.2	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.54	< 0.35	< 0.54	< 0.35	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	< 0.42	< 0.42	< 0.42	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.47	< 0.45	< 0.45	< 0.45	< 0.33	< 0.47	< 0.33	< 0.47	< 0.33	< 0.47	< 0.33	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.87	< 0.64	< 0.64	< 0.64	< 0.71	< 0.87	< 0.71	< 0.87	< 0.71	< 0.87	< 0.71	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.19	< 0.19	< 0.19	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 1.56	< 1.56	< 0.69	< 2.2	< 0.69	< 2.2	< 0.69	< 2.2	< 0.69	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3720 Hecker Rd				3710 Silver Creek Rd	3780 Silver Creek Rd	3802 Silver Creek Rd	3812 Silver Creek Rd		3902 Silver Creek Rd		4004 Silver Creek Rd		4156 Silver Creek Rd	
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/22/13 Outside Spigot**	**11/12/13 Outside Spigot**	**6/2/14 Outside Spigot**	**3/31/16 Outside Spigot**	**5/31/17 Pressure Tank**	**5/30/17 Pressure Tank**	**5/30/17 Pressure Tank**	**5/28/14 Outside Spigot**	**1/14/16 Outside Spigot**	**11/18/14 Outside Spigot**	**10/10/16 Pressure Tank**	**11/18/14 Pressure Tank**	**10/13/15 Pressure Tank**	**5/28/14 Outside Spigot**	**3/30/16 Kitchen Sink**
Polycarbonated Biphenyls (PCBs):																		
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																		
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																		
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																		
Conductivity	uS/cm	NL	NL	775	529	622	NA	NA	NA	NA	520	NA	654	NA	826	917	683	NA
Dissolved Oxygen	ppm	NL	NL	3.81	7.26	1.22	NA	NA	NA	NA	1.98	NA	7.75	NA	2.8	3.87	3.76	NA
ORP	mV	NL	NL	20.1	87.4	155	NA	NA	NA	NA	112	NA	-38	NA	65.8	-48.6	117	NA
pH	SU	NL	NL	8.03	7.86	7.43	NA	NA	NA	NA	7.97	NA	8.26	NA	7.96	7.49	7.91	NA
Temperature	deg C	NL	NL	9.56	10.58	12.1	NA	NA	NA	NA	10.4	NA	10	NA	9.68	10.88	12.2	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4159 Silver Creek Rd														
Analyte	Units	ES[1]	PAL[2]	12/12/13 Pressure Tank	1/6/14 Pressure Tank	6/4/14 Pressure Tank	06/04/14 (DUP) Pressure Tank	9/8/14 Pressure Tank	11/10/14 Pressure Tank	11/10/14 (DUP) Pressure Tank	2/23/15 Pressure Tank	10/14/15 Pressure Tank	3/30/16 Pressure Tank	10/10/16 Pressure Tank	5/30/17 Pressure Tank	10/25/17 Pressure Tank	5/21/18 Pressure Tank
Volatile Organic Compounds (VOCs):																		
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.49 J	0.73 J	0.72 J	0.64 J	0.54 J	0.59 J	0.52 J	0.56 J	0.55 J	0.59 J	0.78 J	0.52 J	0.67 J	0.94 J
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA

AECOM

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4159 Silver Creek Rd													
Analyte	**Units**	**ES[1]**	**PAL[2]**	**12/12/13 Pressure Tank**	**1/6/14 Pressure Tank**	**6/4/14 Pressure Tank**	**06/04/14 (DUP) Pressure Tank**	**9/8/14 Pressure Tank**	**11/10/14 Pressure Tank**	**11/10/14 (DUP) Pressure Tank**	**2/23/15 Pressure Tank**	**10/14/15 Pressure Tank**	**3/30/16 Pressure Tank**	**10/10/16 Pressure Tank**	**5/30/17 Pressure Tank**	**10/25/17 Pressure Tank**	**5/21/18 Pressure Tank**
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	979	593	562	562	562	562	562	654	646	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	2.59	5.87	2.3	2.3	2.3	4.12	4.12	3.56	3.18	NA	NA	NA	NA	NA
ORP	mV	NL	NL	101	135.2	146	146	146	-63.9	-63.9	-138.9	-117.7	NA	NA	NA	NA	NA
pH	SU	NL	NL	8.75	7.99	7.53	7.53	7.53	7.93	7.93	7.94	7.51	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	9.8	9.72	12.4	12.4	12.4	11.23	11.23	8.29	12.91	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4220 Silver Creek Rd		4314 Silver Creek Rd			4315 Silver Creek Rd			4609 Silver Creek Rd		4620 Silver Creek Rd			
Analyte	Units	ES[1]	PAL[2]	5/30/14 Kitchen Sink	5/30/17 Kitchen Sink	12/5/13 Pump Spigot	6/4/14 Pump Spigot	5/30/17 Pressure Tank	12/12/13 Pressure Tank	6/2/14 Pressure Tank	5/31/17 Pressure Tank	12/3/2013 [3] Pressure Tank	6/3/14 Pressure Tank	11/8/13 House-Outside	11/12/13 Barn-Inside	5/28/14 Barn-Inside	5/28/14 House-Outside
Volatile Organic Compounds (VOCs):																	
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.47	< 0.33	< 0.33	< 0.47	< 0.33	< 0.33	< 0.47	< 0.15	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.35	< 0.33	< 0.33	< 0.35	< 0.33	< 0.33	< 0.35	< 0.15	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.69	< 0.45	< 0.45	< 0.69	< 0.45	< 0.45	< 0.69	< 0.2	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.65	< 0.34	< 0.34	< 0.65	< 0.34	< 0.34	< 0.65	< 0.15	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.42	< 0.3	< 0.3	< 0.42	< 0.3	< 0.3	< 0.42	< 0.15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.46	< 0.4	< 0.4	< 0.46	< 0.4	< 0.4	< 0.46	< 0.15	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	< 0.15	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 0.83	< 1.8	< 1.8	< 0.83	< 1.8	< 1.8	< 0.83	< 0.15	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	< 0.15	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 1.29	< 0.98	< 0.98	< 1.29	< 0.98	< 0.98	< 1.29	< 0.15	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 1.14	< 2.2	< 2.2	< 1.14	< 2.2	< 2.2	< 1.14	< 0.15	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 1.88	< 0.88	< 0.88	< 1.88	< 0.88	< 0.88	< 1.88	< 0.2	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.34	< 0.44	< 0.44	< 0.34	< 0.44	< 0.44	< 0.34	< 0.15	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.34	< 0.36	< 0.36	< 0.34	< 0.36	< 0.36	< 0.34	< 0.15	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.45	< 0.41	< 0.41	< 0.45	< 0.41	< 0.41	< 0.45	< 0.15	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.39	< 0.32	< 0.32	< 0.39	< 0.32	< 0.32	< 0.39	< 0.15	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 0.91	< 1.4	< 1.4	< 0.91	< 1.4	< 1.4	< 0.91	< 0.15	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.45	< 0.28	< 0.28	< 0.45	< 0.28	< 0.28	< 0.45	< 0.15	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.49	< 0.33	< 0.33	< 0.49	< 0.33	< 0.33	< 0.49	< 0.15	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.42	< 0.3	< 0.3	< 0.42	< 0.3	< 0.3	< 0.42	< 0.15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	NA	< 0.36	< 0.36	NA	< 0.36	< 0.36	NA	< 0.15	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.36	< 0.21	< 0.21	< 0.36	< 0.21	< 0.21	< 0.36	< 0.15	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.35	< 0.21	< 0.21	< 0.35	< 0.21	< 0.21	< 0.35	< 0.15	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.17	< 0.24	< 0.24	< 0.17	< 0.24	< 0.24	< 0.17	< 0.15	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.43	< 0.32	< 0.32	< 0.43	< 0.32	< 0.32	< 0.43	< 0.15	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	< 0.15	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.31	< 0.37	< 0.37	< 0.31	< 0.37	< 0.37	< 0.31	< 0.15	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.49	< 0.35	< 0.35	< 0.49	< 0.35	< 0.35	< 0.49	< 0.15	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.21	< 0.33	< 0.33	< 0.21	< 0.33	< 0.33	< 0.21	< 0.15	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Chlorobenzene	ug/l	100	20	< 0.24	< 0.27	< 0.24	< 0.24	< 0.27	< 0.24	< 0.24	< 0.27	< 0.15	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	ug/l	400	80	< 0.63	< 0.5	< 0.63	< 0.63	< 0.5	< 0.63	< 0.63	< 0.5	< 0.15	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63
Chloroform	ug/l	6	0.6	< 0.28	< 0.96	< 0.28	< 0.28	< 0.96	< 0.28	< 0.28	< 0.96	< 0.15	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28
Chloromethane	ug/l	30	3	< 0.81	< 1.3	< 0.81	< 0.81	< 1.3	< 0.81	< 0.81	< 1.3	< 0.15	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.41	< 0.38	< 0.38	< 0.41	< 0.38	< 0.38	< 0.41	< 0.15	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	< 0.21	NA	NA	< 0.21	NA	NA	< 0.21	< 0.15	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.45	< 0.22	< 0.22	< 0.45	< 0.22	< 0.22	< 0.45	< 0.15	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	< 0.15	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.38	< 0.44	< 0.44	< 0.38	< 0.44	< 0.44	< 0.38	< 0.2	< 0.44	< 0.44	< 0.44	0.45 J	< 0.44
Ethylbenzene	ug/l	700	140	< 0.55	< 0.2	< 0.55	< 0.55	< 0.2	< 0.55	< 0.55	< 0.2	< 0.15	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.47	< 1.5	< 1.5	< 1.47	< 1.5	< 1.5	< 1.47	< 0.15	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.26	< 0.23	< 0.23	< 0.26	< 0.23	< 0.23	< 0.26	NA	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.29	< 0.3	< 0.3	< 0.29	< 0.3	< 0.3	< 0.29	< 0.15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
m,p-Xylenes	ug/l	2000	400	< 0.69	< 1.56	< 0.69	< 0.69	< 1.56	< 0.69	< 0.69	< 1.56	< 0.15	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.94	< 0.5	< 0.5	< 0.94	< 0.5	< 0.5	< 0.94	< 0.15	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.82	< 0.23	< 0.23	< 0.82	< 0.23	< 0.23	< 0.82	< 0.15	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Naphthalene	ug/l	100	10	< 1.7	< 2.17	< 1.7	< 1.7	< 2.17	< 1.7	< 1.7	< 2.17	< 0.15	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.34	< 0.35	< 0.35	< 0.34	< 0.35	< 0.35	< 0.34	< 0.15	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.19	< 0.25	< 0.25	< 0.19	< 0.25	< 0.25	< 0.19	< 0.15	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
o-Xylene	ug/l	2000	400	< 0.63	< 0.39	< 0.63	< 0.63	< 0.39	< 0.63	< 0.63	< 0.39	< 0.15	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.28	< 0.31	< 0.31	< 0.28	< 0.31	< 0.31	< 0.28	< 0.15	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.24	< 0.33	< 0.33	< 0.24	< 0.33	< 0.33	< 0.24	< 0.15	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	< 0.15	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.39	< 0.36	< 0.36	< 0.39	< 0.36	< 0.36	< 0.39	< 0.15	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.48	< 0.33	< 0.33	< 0.48	< 0.33	< 0.33	< 0.48	< 0.15	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.67	< 0.69	< 0.69	< 0.67	< 0.69	< 0.69	< 0.67	< 0.15	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 1.14	< 2.2	< 2.2	< 1.14	< 2.2	< 2.2	< 1.14	< 0.15	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.15	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	< 0.42	NA	NA	< 0.42	NA	NA	< 0.42	< 0.15	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.45	< 0.33	< 0.33	< 0.45	< 0.33	< 0.33	< 0.45	< 0.15	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.64	< 0.71	< 0.71	< 0.64	< 0.71	< 0.71	< 0.64	< 0.15	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.19	< 0.18	< 0.18	< 0.19	< 0.18	< 0.18	< 0.19	< 0.2	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Xylene (Total)	ug/l	2000	400	< 0.69	< 1.56	< 0.69	< 0.69	< 1.56	< 0.69	< 0.69	< 1.56	< 0.15	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69

AECOM

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4220 Silver Creek Rd		4314 Silver Creek Rd			4315 Silver Creek Rd			4609 Silver Creek Rd		4620 Silver Creek Rd			
Analyte	Units	ES[1]	PAL[2]	5/30/14 Kitchen Sink	5/30/17 Kitchen Sink	12/5/13 Pump Spigot	6/4/14 Pump Spigot	5/30/17 Pressure Tank	12/12/13 Pressure Tank	6/2/14 Pressure Tank	5/31/17 Pressure Tank	12/3/2013 [3] Pressure Tank	6/3/14 Pressure Tank	11/8/13 House-Outside	11/12/13 Barn-Inside	5/28/14 Barn-Inside	5/28/14 House-Outside
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	835	NA	956	958	NA	789	545	NA	NA	526	534	493	576	614
Dissolved Oxygen	ppm	NL	NL	4.54	NA	7.32	2.97	NA	4.01	1.91	NA	NA	2.61	10.33	3.49	4.3	0.99
ORP	mV	NL	NL	145	NA	87	168	NA	105	111	NA	NA	165	86.7	114.5	88	89
pH	SU	NL	NL	7.11	NA	8.05	7.48	NA	8.32	7.38	NA	NA	7.25	7.84	7.53	7.68	7.84
Temperature	deg C	NL	NL	11.4	NA	8.64	11.7	NA	6.8	12.3	NA	NA	12.4	10.58	8.23	8.2	10.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4752 Silver Creek Rd		4808 Silver Creek Rd		5202 Silver Creek Rd		2706 CTH CR		2716 CTH CR		
Analyte	Units	ES[1]	PAL[2]	12/5/13 Kitchen Sink	6/2/14 Kitchen Sink	12/5/13 Pump Spigot	5/30/14 Pump Spigot	1/9/08 Hose Bib	12/5/13 Inside Barn	8/26/14 Outside Spigot	10/5/16 Outside Spigot	9/8/14 Pressure Tank	11/18/14 Pressure Tank	10/13/15 Pressure Tank
Volatile Organic Compounds (VOCs):														
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.33	< 0.33	< 0.48	< 0.33	< 0.33	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.5	< 0.33	< 0.33	< 0.84	< 0.33	< 0.33	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.75	< 0.45	< 0.45	< 0.52	< 0.45	< 0.45	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.5	< 0.34	< 0.34	< 0.48	< 0.34	< 0.34	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.56	< 0.3	< 0.3	< 1.1	< 0.3	< 0.3	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.64	< 0.4	< 0.4	< 0.65	< 0.4	< 0.4	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.6	< 1.8	< 1.8	< 2.7	< 1.8	< 1.8	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 1.5	< 0.98	< 0.98	< 1.7	< 0.98	< 0.98	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 1.2	< 2.2	< 2.2	< 1.6	< 2.2	< 2.2	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 0.88	< 0.88	< 1.4	< 0.88	< 0.88	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.49	< 0.44	< 0.44	< 0.63	< 0.44	< 0.44	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.35	< 0.36	< 0.36	< 0.46	< 0.36	< 0.36	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.45	< 0.41	< 0.41	< 0.48	< 0.41	< 0.41	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.47	< 0.32	< 0.32	< 0.43	< 0.32	< 0.32	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 0.37	< 1.4	< 1.4	< 1.5	< 1.4	< 1.4	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.3	< 0.28	< 0.28	< 0.52	< 0.28	< 0.28	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.39	< 0.33	< 0.33	< 0.42	< 0.33	< 0.33	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.33	< 0.3	< 0.3	< 0.49	< 0.3	< 0.3	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.98	< 0.36	< 0.36	< 3.1	< 0.36	< 0.36	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.49	< 0.21	< 0.21	< 0.4	< 0.21	< 0.21	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.38	< 0.21	< 0.21	< 0.63	< 0.21	< 0.21	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.47	< 0.24	< 0.24	< 0.44	< 0.24	< 0.24	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.36	< 0.32	< 0.32	< 0.48	< 0.32	< 0.32	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.5	< 0.37	< 0.37	< 0.46	< 0.37	< 0.37	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.38	< 0.35	< 0.35	< 0.46	< 0.35	< 0.35	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.46	< 0.33	< 0.33	< 0.51	< 0.33	< 0.33	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.31	< 0.24	< 0.24	< 0.46	< 0.24	< 0.24	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.47	< 0.63	< 0.63	< 0.65	< 0.63	< 0.63	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.48	< 0.28	< 0.28	< 0.43	< 0.28	< 0.28	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1	< 0.81	< 0.81	< 1.9	< 0.81	< 0.81	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.38	< 0.68	< 0.38	< 0.38	< 0.45	< 0.38	< 0.38	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.32	< 0.22	< 0.22	< 0.45	< 0.22	< 0.22	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.46	< 0.44	< 0.44	< 0.87	< 0.44	< 0.44	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.38	< 0.55	< 0.55	< 0.71	< 0.55	< 0.55	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 1.5	< 1.5	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 1.3	< 0.23	< 0.23	< 0.44	< 0.23	< 0.23	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.48	< 0.3	< 0.3	< 0.82	< 0.3	< 0.3	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.67	< 0.69	< 0.69	< 2.2	< 0.69	< 0.69	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.69	< 0.5	< 0.5	< 1.3	< 0.5	< 0.5	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.52	< 0.23	< 0.23	< 1.1	< 0.23	< 0.23	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.8	< 1.7	< 1.7	< 1.6	< 1.7	< 1.7	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.52	< 0.35	< 0.35	< 1	< 0.35	< 0.35	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.38	< 0.25	< 0.25	< 0.77	< 0.25	< 0.25	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.32	< 0.63	< 0.63	< 0.9	< 0.63	< 0.63	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.35	< 0.31	< 0.31	< 1.1	< 0.31	< 0.31	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.36	< 0.33	< 0.33	< 1.2	< 0.33	< 0.33	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.34	< 0.36	< 0.36	< 1.1	< 0.36	< 0.36	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.52	< 0.33	< 0.33	< 0.49	< 0.33	< 0.33	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.46	< 0.69	< 0.69	< 0.44	< 0.69	< 0.69	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 1.2	< 2.2	< 2.2	< 1.6	< 2.2	< 2.2	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.95	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.44	< 0.33	< 0.33	< 0.47	< 0.33	< 0.33	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.61	< 0.71	< 0.71	< 0.87	< 0.71	< 0.71	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.2	< 0.18	< 0.18	< 0.17	< 0.18	< 0.18	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.67	< 0.69	< 0.69	< 2.2	< 0.69	< 0.69	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4752 Silver Creek Rd		4808 Silver Creek Rd		5202 Silver Creek Rd		2706 CTH CR		2716 CTH CR		
Analyte	Units	ES[1]	PAL[2]	12/5/13 Kitchen Sink	6/2/14 Kitchen Sink	12/5/13 Pump Spigot	5/30/14 Pump Spigot	1/9/08 Hose Bib	12/5/13 Inside Barn	8/26/14 Outside Spigot	10/5/16 Outside Spigot	9/8/14 Pressure Tank	11/18/14 Pressure Tank	10/13/15 Pressure Tank
Polycarbonated Biphenyls (PCBs):														
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:														
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:														
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:														
Conductivity	uS/cm	NL	NL	535	530	588	538	NA	609	540	NA	658	374	409
Dissolved Oxygen	ppm	NL	NL	5.22	1.21	7.21	1.58	NA	5.32	1.76	NA	2.11	7.32	5.22
ORP	mV	NL	NL	69.9	138	83.4	137	NA	81.1	227	NA	131	20.6	-91
pH	SU	NL	NL	7.39	7.64	6.54	7.69	NA	8.72	7.59	NA	7.59	8.61	7.87
Temperature	deg C	NL	NL	12.19	12.1	8.93	11.4	NA	7.5	14.2	NA	12.83	8.45	11.9

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2717 CTH CR(4141 Viebahn St)								2734(2804) CTH CR						
				Original Potable Well						Non-Potable Well (City Water Provided Dec 2016)		Original Potable Well (City Water Provided Dec 2016)						
Analyte	Units	ES[1]	PAL[2]	8/25/14 Pressure Tank	9/8/14 Pressure Tank	09/08/14 (DUP) Pressure Tank	11/10/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	3/31/16 Garage Faucet	10/6/16 Garage Faucet	6/3/14 Garage Spigot	8/25/14 Garage Spigot	11/10/14 Garage Spigot	11/25/14 Garage Spigot	11/25/14 (DUP) Garage Spigot	2/24/15 Pressure Tank	10/14/15 Pressure Tank
Volatile Organic Compounds (VOCs):																		
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 0.81	**24.3**	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.4	1.31	1.44	1.3	1.26 J	1.72	< 0.45	1.53	0.77 J	0.77 J	0.63 J	0.93 J	1.02 J	0.7 J	0.94 J
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**0.21 J**	**0.29 J**	**0.31 J**	**0.39 J**	**0.35 J**	**0.47 J**	< 0.17	**0.32 J**	< 0.18	< 0.18	**0.26 J**	**0.38 J**	**0.43 J**	**0.2 J**	**0.45 J**
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2717 CTH CR(4141 Viebahn St)								2734(2804) CTH CR						
				Original Potable Well						Non-Potable Well (City Water Provided Dec 2016)		Original Potable Well (City Water Provided Dec 2016)						
Analyte	Units	ES[1]	PAL[2]	8/25/14 Pressure Tank	9/8/14 Pressure Tank	09/08/14 (DUP) Pressure Tank	11/10/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	3/31/16 Garage Faucet	10/6/16 Garage Faucet	6/3/14 Garage Spigot	8/25/14 Garage Spigot	11/10/14 Garage Spigot	11/25/14 Garage Spigot	11/25/14 (DUP) Garage Spigot	2/24/15 Pressure Tank	10/14/15 Pressure Tank
Polycarbonated Biphenyls (PCBs):																		
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																		
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																		
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																		
Conductivity	uS/cm	NL	NL	640	721	NA	625	662	621	NA	NA	485	606	661	NA	NA	597	594
Dissolved Oxygen	ppm	NL	NL	2.28	1.73	NA	3.39	4.63	1.45	NA	NA	0.97	0.96	1.79	NA	NA	6.15	1.01
ORP	mV	NL	NL	239	221	NA	-65	-162.7	-113.4	NA	NA	161	237	-99.4	NA	NA	-133.9	-121.2
pH	SU	NL	NL	8.03	7.87	NA	7.95	8.15	7.73	NA	NA	7.32	8.01	7.87	NA	NA	7.96	7.53
Temperature	deg C	NL	NL	8.03	9.15	NA	12.28	6.49	13.1	NA	NA	12.2	15.5	10.42	NA	NA	6.11	13.1

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2832&2904 CTH CR				2911 CTH CR			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**2/4/14 Kitchen Sink**	**6/3/14 Kitchen Sink**	**3/30/16 Kitchen Sink**	**10/27/17 Kitchen Sink**	**5/29/14 Pressure Tank**	**10/7/16 Pressure Tank**	**10/27/17 Pressure Tank**	**10/27/17 (DUP) Pressure Tank**
Volatile Organic Compounds (VOCs):											
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.47	< 0.33	< 0.48	< 0.47	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.35	< 0.33	< 0.84	< 0.35	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.69	< 0.45	< 0.52	< 0.69	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.65	< 0.34	< 0.48	< 0.65	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 0.42	< 0.3	< 1.1	< 0.42	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.46	< 0.4	< 0.65	< 0.46	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 0.83	< 1.8	< 2.7	< 0.83	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.29	< 0.98	< 1.7	< 1.29	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 1.6	< 1.14	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.88	< 0.88	< 1.4	< 1.88	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.34	< 0.44	< 0.63	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.34	< 0.36	< 0.46	< 0.34	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.48	< 0.45	< 0.41	< 0.48	< 0.45	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.39	< 0.32	< 0.43	< 0.39	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 0.91	< 1.4	< 1.5	< 0.91	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.45	< 0.28	< 0.52	< 0.45	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.49	< 0.33	< 0.42	< 0.49	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.42	< 0.3	< 0.49	< 0.42	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	NA	< 0.36	< 3.1	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.36	< 0.21	< 0.4	< 0.36	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.35	< 0.21	< 0.63	< 0.35	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.17	< 0.24	< 0.44	< 0.17	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.43	< 0.32	< 0.48	< 0.43	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.31	< 0.37	< 0.46	< 0.31	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.49	< 0.35	< 0.46	< 0.49	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.51	< 0.21	< 0.33	< 0.51	< 0.21	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.27	< 0.24	< 0.46	< 0.27	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.5	< 0.63	< 0.65	< 0.5	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.96	< 0.28	< 0.43	< 0.96	< 0.96
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.3	< 0.81	< 1.9	< 1.3	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.45	< 0.41	< 0.38	< 0.45	< 0.41	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	< 0.21	NA	NA	< 0.21	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.38	< 0.44	< 0.87	< 0.38	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.2	< 0.55	< 0.71	< 0.2	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 1.47	< 1.5	< 2.2	< 1.47	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.26	< 0.23	< 0.44	< 0.26	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.29	< 0.3	< 0.82	< 0.29	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 2.2	< 1.56	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 0.94	< 0.5	< 1.3	< 0.94	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 0.82	< 0.23	< 1.1	< 0.82	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 2.17	< 1.7	< 1.6	< 2.17	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 0.34	< 0.35	< 1	< 0.34	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.19	< 0.25	< 0.77	< 0.19	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.39	< 0.63	< 0.9	< 0.39	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 0.28	< 0.31	< 1.1	< 0.28	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 0.24	< 0.33	< 1.2	< 0.24	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 0.39	< 0.36	< 1.1	< 0.39	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.49	< 0.48	< 0.33	< 0.49	< 0.48	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.67	< 0.69	< 0.44	< 0.67	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 1.6	< 1.14	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	< 0.42	NA	NA	< 0.42	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.45	< 0.33	< 0.47	< 0.45	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.64	< 0.71	< 0.87	< 0.64	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.19	< 0.18	< 0.17	< 0.19	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 2.2	< 1.56	< 1.56

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2832&2904 CTH CR				2911 CTH CR			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**2/4/14 Kitchen Sink**	**6/3/14 Kitchen Sink**	**3/30/16 Kitchen Sink**	**10/27/17 Kitchen Sink**	**5/29/14 Pressure Tank**	**10/7/16 Pressure Tank**	**10/27/17 Pressure Tank**	**10/27/17 (DUP) Pressure Tank**
Polycarbonated Biphenyls (PCBs):											
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:											
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:											
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:											
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:											
Conductivity	uS/cm	NL	NL	411	588	NA	NA	727	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	NA	2.35	NA	NA	2.98	NA	NA	NA
ORP	mV	NL	NL	95.2	167	NA	NA	115	NA	NA	NA
pH	SU	NL	NL	7.32	7.6	NA	NA	7.19	NA	NA	NA
Temperature	deg C	NL	NL	6.61	14.5	NA	NA	11.7	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2916 CTH CR								2917 CTH CR				
				Original Potable Well								Original Potable Well (City Water Provided Dec 2016)				
Analyte	Units	ES[1]	PAL[2]	2/4/14 Pressure Tank	5/28/14 Pressure Tank	8/25/14 Pressure Tank	11/10/14 Pressure Tank	11/25/14 Pressure Tank	3/11/15 Pressure Tank	03/11/15 (DUP) Pressure Tank	10/13/15 Pressure Tank	2/4/14 Kitchen Sink	5/30/14 Kitchen Sink	10/13/15 Spigot	10/27/15 Spigot	10/27/15 (DUP) Spigot
Volatile Organic Compounds (VOCs):																
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.54	< 0.48	< 0.41	< 0.41	< 0.48	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.65	< 0.51	< 0.33	< 0.33	< 0.51	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	0.97 J	0.9 J	1.02 J	0.74 J	0.82 J	0.75 J	0.8 J	1.02 J	< 0.38	< 0.38	1.6	1.41	1.67
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.74	< 0.49	< 0.33	< 0.33	< 0.49	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**0.18 J**	< 0.18	< 0.18	**0.28 J**	**0.37 J**	< 0.17	**0.18 J**	**0.26 J**	< 0.18	< 0.18	**0.43 J**	**0.37 J**	**0.37 J**
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 0.9	< 2.2	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2916 CTH CR								2917 CTH CR				
				Original Potable Well								Original Potable Well (City Water Provided Dec 2016)				
Analyte	Units	ES[1]	PAL[2]	2/4/14 Pressure Tank	5/28/14 Pressure Tank	8/25/14 Pressure Tank	11/10/14 Pressure Tank	11/25/14 Pressure Tank	3/11/15 Pressure Tank	03/11/15 (DUP) Pressure Tank	10/13/15 Pressure Tank	2/4/14 Kitchen Sink	5/30/14 Kitchen Sink	10/13/15 Spigot	10/27/15 Spigot	10/27/15 (DUP) Spigot
Polycarbonated Biphenyls (PCBs):																
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																
Conductivity	uS/cm	NL	NL	396	1329	NA	601	NA	NA	NA	614	962	1709	1134	NA	NA
Dissolved Oxygen	ppm	NL	NL	5.32	1.5	1.73	1.64	NA	NA	NA	4.4	NA	1.22	1.49	NA	NA
ORP	mV	NL	NL	110	121	138	-85.3	NA	NA	NA	-104.5	113.2	134	-135.9	NA	NA
pH	SU	NL	NL	7.35	12.6	7.53	7.91	NA	NA	NA	7.58	7.32	7.82	7.39	NA	NA
Temperature	deg C	NL	NL	9.6	12.6	11.5	10.5	NA	NA	NA	11.98	9.01	11.9	12.32	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3023 CTH CR								
				Original Potable Well				Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	2/4/14 Outside Spigot	02/04/14 (DUP) Outside Spigot	6/2/14 Outside Spigot	8/25/14 Outside Spigot	10/8/14 Outside Spigot	11/4/14 Outside Spigot	2/24/15 Outside Spigot	10/13/15 Outside Spigot	10/5/16 Outside Spigot
Volatile Organic Compounds (VOCs):												
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	2.84	2.96	2.87	2.34	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	NA	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**0.55 J**	**0.58**	**0.41 J**	**0.33 J**	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	NA	< 2.2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3023 CTH CR								
				Original Potable Well				Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	2/4/14 Outside Spigot	02/04/14 (DUP) Outside Spigot	6/2/14 Outside Spigot	8/25/14 Outside Spigot	10/8/14 Outside Spigot	11/4/14 Outside Spigot	2/24/15 Outside Spigot	10/13/15 Outside Spigot	10/5/16 Outside Spigot
Polycarbonated Biphenyls (PCBs):												
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:												
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	1545	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	**5.17**	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:												
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:												
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	2164	NA
Field Screening Measurements:												
Conductivity	uS/cm	NL	NL	NA	404	562	619	NA	2352	2286	2337	NA
Dissolved Oxygen	ppm	NL	NL	NA	NA	1.5	0.87	NA	2.21	3.74	2.63	NA
ORP	mV	NL	NL	NA	113.2	152	222	NA	-126.3	-112	-68.2	NA
pH	SU	NL	NL	NA	7.32	7.42	7.75	NA	7.7	7.64	7.21	NA
Temperature	deg C	NL	NL	NA	9.16	11.1	12.8	NA	10.3	8.17	13.01	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3120 CTH CR										
				Original Potable Well						Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	1/3/14 Pressure Tank	2/4/14 Pressure Tank	5/28/14 Pressure Tank	05/28/14 (DUP) Pressure Tank	8/25/14 Pressure Tank	08/25/14 (DUP) Pressure Tank	10/8/14 Pressure Tank	11/4/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	10/6/16 Pressure Tank
Volatile Organic Compounds (VOCs):														
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	2.74	2.86	2.65	2.68	1.89	2.23	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	NA	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**0.6**	**0.43 J**	**0.35 J**	**0.26 J**	**0.27 J**	**0.24 J**	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	NA	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3120 CTH CR										
				Original Potable Well						Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	1/3/14 Pressure Tank	2/4/14 Pressure Tank	5/28/14 Pressure Tank	05/28/14 (DUP) Pressure Tank	8/25/14 Pressure Tank	08/25/14 (DUP) Pressure Tank	10/8/14 Pressure Tank	11/4/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	10/6/16 Pressure Tank
Polycarbonated Biphenyls (PCBs):														
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:														
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	1309	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4.82**	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:														
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	1966	NA
Field Screening Measurements:														
Conductivity	uS/cm	NL	NL	566	570	616	616	649	649	NA	2177	2051	2119	NA
Dissolved Oxygen	ppm	NL	NL	5.32	5.32	4.79	4.79	1.24	1.24	NA	3.21	4.58	2.5	NA
ORP	mV	NL	NL	158.1	157.3	111	111	247	247	NA	-135.6	-112.7	-77.4	NA
pH	SU	NL	NL	7.51	7.38	7.8	7.8	7.91	7.91	NA	7.61	7.79	7.19	NA
Temperature	deg C	NL	NL	8.27	8.04	11.2	11.2	7.91	7.91	NA	10.3	7.94	12.73	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3224 CTH CR						3312 CTH CR					
Analyte	**Units**	**ES[1]**	**PAL[2]**	**2/4/14 Pressure Tank**	**6/4/14 Pressure Tank**	**8/25/14 Pressure Tank**	**11/17/14 Pressure Tank**	**3/31/16 Pressure Tank**	**10/25/17 Pressure Tank**	**2/26/14 Bath Tub**	**6/2/14 Bath Tub**	**8/26/14 Outside Spigot**	**11/10/14 Outside Spigot**	**10/5/16 Bath Tub**	**10/31/17 Bath Tub**
Volatile Organic Compounds (VOCs):															
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.47	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.69	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.65	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 0.42	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.46	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 0.83	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.29	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.34	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.34	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48	< 0.45	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.39	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 0.91	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.49	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.42	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.36	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.35	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.17	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.43	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.31	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.49	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.51	< 0.21	< 0.33	< 0.33	< 0.33	< 0.33	< 0.51	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.27	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.5	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.96	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45	< 0.41	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	< 0.21	NA	NA	NA	NA	NA	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.38	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.2	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 1.47	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.26	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.29	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 0.94	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 0.82	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 2.17	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 0.34	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.19	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.39	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 0.28	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 0.24	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 0.39	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.49	< 0.48	< 0.33	< 0.33	< 0.33	< 0.33	< 0.49	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.67	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	< 0.42	NA	NA	NA	NA	NA	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.45	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.64	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.19	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3224 CTH CR						3312 CTH CR					
Analyte	**Units**	**ES[1]**	**PAL[2]**	**2/4/14 Pressure Tank**	**6/4/14 Pressure Tank**	**8/25/14 Pressure Tank**	**11/17/14 Pressure Tank**	**3/31/16 Pressure Tank**	**10/25/17 Pressure Tank**	**2/26/14 Bath Tub**	**6/2/14 Bath Tub**	**8/26/14 Outside Spigot**	**11/10/14 Outside Spigot**	**10/5/16 Bath Tub**	**10/31/17 Bath Tub**
Polycarbonated Biphenyls (PCBs):															
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:															
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:															
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:															
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:															
Conductivity	uS/cm	NL	NL	383	513	653	598	NA	NA	NA	416	765	2750	NA	NA
Dissolved Oxygen	ppm	NL	NL	NA	2.87	1.91	2.61	NA	NA	NA	2.48	0.57	3.11	NA	NA
ORP	mV	NL	NL	111.3	170	235	-55.8	NA	NA	NA	87	225	40.3	NA	NA
pH	SU	NL	NL	NA	7.66	8.17	7.98	NA	NA	NA	7.93	7.75	7.98	NA	NA
Temperature	deg C	NL	NL	9.24	11.5	13.1	8.69	NA	NA	NA	11.8	11.7	10.63	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3322 CTH CR						3403 CTH CR								
										Original Potable Well				Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	1/6/14 Kitchen Sink	6/4/14 Kitchen Sink	8/25/14 Kitchen Sink	11/10/14 Kitchen Sink	10/13/15 Kitchen Sink	10/25/17 Kitchen Sink	1/3/14 Kitchen Sink	2/5/14 Kitchen Sink	5/28/14 Kitchen Sink	8/25/14 Kitchen Sink	10/21/14 Kitchen Sink	11/4/14 Kitchen Sink	2/23/15 Kitchen Sink	10/13/15 Kitchen Sink	10/5/16 Outside Spigot
Volatile Organic Compounds (VOCs):																		
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.47	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.69	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.65	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 0.42	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.46	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 0.83	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.29	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.34	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.34	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48	< 0.45	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.39	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 0.91	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.49	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.42	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.36	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.35	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.17	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.43	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.31	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.49	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.51	< 0.21	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.27	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.5	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.96	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45	< 0.41	1.3	1.67	1.48	1.34	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	< 0.21	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.38	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.2	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 1.47	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.26	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.29	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 0.94	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 0.82	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 2.17	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 0.34	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.19	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.39	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 0.28	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 0.24	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 0.39	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.49	< 0.48	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.67	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	NA	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	< 0.42	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.45	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.64	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.19	**0.56 J**	**0.25 J**	**0.22 J**	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	NA	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3322 CTH CR						3403 CTH CR								
										Original Potable Well				Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	1/6/14 Kitchen Sink	6/4/14 Kitchen Sink	8/25/14 Kitchen Sink	11/10/14 Kitchen Sink	10/13/15 Kitchen Sink	10/25/17 Kitchen Sink	1/3/14 Kitchen Sink	2/5/14 Kitchen Sink	5/28/14 Kitchen Sink	8/25/14 Kitchen Sink	10/21/14 Kitchen Sink	11/4/14 Kitchen Sink	2/23/15 Kitchen Sink	10/13/15 Kitchen Sink	10/5/16 Outside Spigot
Polycarbonated Biphenyls (PCBs):																		
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																		
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1688	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.32 J**	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																		
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2349	NA
Field Screening Measurements:																		
Conductivity	uS/cm	NL	NL	417	380	475	475	520	520	935	682	1060	1094	NA	2528	2436	2361	NA
Dissolved Oxygen	ppm	NL	NL	5.32	1.3	0.57	0.57	2.02	2.02	6.51	5.01	1.19	3.23	NA	1.49	5.2	1.52	NA
ORP	mV	NL	NL	174.8	151	242	242	-114.7	-114.7	166.6	32.2	84	236	NA	-219.9	-129.3	-41.4	NA
pH	SU	NL	NL	7.82	7.9	8.06	8.06	7.72	7.72	7.51	7.18	7.64	7.74	NA	7.69	7.66	7.15	NA
Temperature	deg C	NL	NL	9.08	12.1	14.4	14.4	11.5	11.5	7.63	8.12	10.5	12.9	NA	11.76	6.99	16.42	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3412 CTH CR					3422 CTH CR					
Analyte	**Units**	**ES[1]**	**PAL[2]**	**1/3/14 Pressure Tank**	**8/26/14 Pressure Tank**	**11/10/14 Pressure Tank**	**3/31/16 Pressure Tank**	**10/25/17 Pressure Tank**	**1/6/14 Pressure Tank**	**5/30/14 Pressure Tank**	**8/25/14 Pressure Tank**	**11/18/14 Pressure Tank**	**10/5/16 Pressure Tank**	**10/30/17 Pressure Tank**
Volatile Organic Compounds (VOCs):														
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.48	< 0.47	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.52	< 0.69	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.48	< 0.65	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 1.1	< 0.42	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.46	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 2.7	< 0.83	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 1.7	< 1.29	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 1.4	< 1.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.63	< 0.34	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.46	< 0.34	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.48	< 0.45	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.43	< 0.39	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.5	< 0.91	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.52	< 0.45	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.42	< 0.49	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.49	< 0.42	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 3.1	NA	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.4	< 0.36	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.63	< 0.35	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.17	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.48	< 0.43	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.46	< 0.31	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.46	< 0.49	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.51	< 0.21	< 0.33	< 0.33	< 0.33	< 0.33	< 0.51	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.27	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.65	< 0.5	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.96	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 1.9	< 1.3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.38	< 0.45	< 0.41	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	< 0.21	NA	NA	NA	NA	NA	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.87	< 0.38	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.71	< 0.2	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 2.2	< 1.47	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.44	< 0.26	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.82	< 0.29	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 0.94	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 1.1	< 0.82	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.6	< 2.17	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 1	< 0.34	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.77	< 0.19	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.9	< 0.39	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 1.1	< 0.28	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 1.2	< 0.24	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 1.1	< 0.39	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.49	< 0.48	< 0.33	< 0.33	< 0.33	< 0.33	< 0.49	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.67	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	< 0.42	NA	NA	NA	NA	NA	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.47	< 0.45	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.87	< 0.64	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.19	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 1.56

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3412 CTH CR					3422 CTH CR					
Analyte	**Units**	**ES[1]**	**PAL[2]**	**1/3/14 Pressure Tank**	**8/26/14 Pressure Tank**	**11/10/14 Pressure Tank**	**3/31/16 Pressure Tank**	**10/25/17 Pressure Tank**	**1/6/14 Pressure Tank**	**5/30/14 Pressure Tank**	**8/25/14 Pressure Tank**	**11/18/14 Pressure Tank**	**10/5/16 Pressure Tank**	**10/30/17 Pressure Tank**
Polycarbonated Biphenyls (PCBs):														
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:														
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:														
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:														
Conductivity	uS/cm	NL	NL	909	521	512	NA	NA	627	605	633	653	NA	NA
Dissolved Oxygen	ppm	NL	NL	5.52	1.25	2.82	NA	NA	5.32	4.07	2.53	7.38	NA	NA
ORP	mV	NL	NL	155	238	-51.5	NA	NA	142	1.32	246	-84.2	NA	NA
pH	SU	NL	NL	7.02	7.98	7.95	NA	NA	7.13	7.62	8.07	8	NA	NA
Temperature	deg C	NL	NL	8.99	13.6	10.65	NA	NA	8.81	12.3	14.2	10.56	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3504 CTH CR															
				Original Potable Well															
Analyte	Units	ES[1]	PAL[2]	12/5/13 Outside Spigot	12/05/13 (DUP) Outside Spigot	1/6/14 Basement	01/06/14 (DUP) Basement	2/5/14 Basement	5/30/14 Basement	05/30/14 (DUP) Basement	8/25/14 Basement	08/25/14 (DUP) Basement	11/18/14 Basement	11/18/14 (DUP) Basement	2/23/15 Basement	10/14/15 Basement	10/20/15	3/31/16 Basement	03/31/16 (DUP) Basement	10/11/16 Basement
Volatile Organic Compounds (VOCs):																			
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	NA	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	NA	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	NA	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	NA	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	NA	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	NA	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	NA	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	NA	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	NA	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	NA	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	NA	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	NA	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	NA	< 0.48	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	NA	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	NA	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	NA	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	NA	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	NA	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	NA	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	NA	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	NA	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	NA	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	NA	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	NA	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	NA	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	NA	< 0.51	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	NA	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	NA	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	NA	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	NA	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.28	1.38	1.43	1.34	1.42	1.22	1.13 J	0.99 J	1.02 J	1.41	1.26	1.19 J	1.27 J	NA	0.76 J	0.91 J	1.17 J
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	NA	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	NA	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	NA	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	NA	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	NA	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	NA	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	NA	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	NA	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	NA	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	NA	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	NA	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	NA	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	NA	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	NA	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	NA	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	NA	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	NA	< 0.49	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	NA	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	NA	< 1.6	< 1.6	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	NA	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	NA	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	NA	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	**0.23 J**	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	**0.18 J**	**0.17 J**	< 0.17	NA	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	NA	< 2.2	< 2.2	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3504 CTH CR															
				Original Potable Well															
Analyte	Units	ES[1]	PAL[2]	12/5/13 Outside Spigot	12/05/13 (DUP) Outside Spigot	1/6/14 Basement	01/06/14 (DUP) Basement	2/5/14 Basement	5/30/14 Basement	05/30/14 (DUP) Basement	8/25/14 Basement	08/25/14 (DUP) Basement	11/18/14 Basement	11/18/14 (DUP) Basement	2/23/15 Basement	10/14/15 Basement	10/20/15	3/31/16 Basement	03/31/16 (DUP) Basement	10/11/16 Basement
Polycarbonated Biphenyls (PCBs):																			
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																			
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	413	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5.27**	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																			
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																			
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	698	NA	NA	NA
Field Screening Measurements:																			
Conductivity	uS/cm	NL	NL	633	NA	636	636	503	586	586	699	699	687	687	715	709	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	4.58	NA	7.7	7.7	5.06	2.3	2.3	2.42	2.42	5.33	5.33	4.71	4.46	NA	NA	NA	NA
ORP	mV	NL	NL	75.3	NA	124.4	124.4	38.2	144	144	242	242	-100.7	-100.7	-122.8	-109.5	NA	NA	NA	NA
pH	SU	NL	NL	8.15	NA	7.53	7.53	7.13	7.39	7.39	7.75	7.75	8.05	8.05	7.92	7.5	NA	NA	NA	NA
Temperature	deg C	NL	NL	12.49	NA	9.07	9.07	11.49	12.1	12.1	13.8	13.8	9.79	9.79	8.25	12.19	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3504 CTH CR			3523 CTH CR				3533 CTH CR				3611 CTH CR		
				Replacement Potable Well													
Analyte	Units	ES[1]	PAL[2]	10/24/16 Basement	11/8/16 Basement	2/23/17 Basement	1/3/14 Basement	6/3/14 Basement	10/14/15 Basement	10/25/17 Basement	1/6/14 Basement	6/3/14 Basement	3/30/16 Basement	10/27/17 Basement	5/30/14 Outside Spigot	10/5/16 Outside Spigot	10/25/17 Outside Spigot
Volatile Organic Compounds (VOCs):																	
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.48	< 0.48	< 0.47	< 0.33	< 0.33	< 0.48	< 0.47	< 0.33	< 0.33	< 0.48	< 0.47	< 0.33	< 0.48	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.84	< 0.84	< 0.35	< 0.33	< 0.33	< 0.84	< 0.35	< 0.33	< 0.33	< 0.84	< 0.35	< 0.33	< 0.84	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.52	< 0.52	< 0.69	< 0.45	< 0.45	< 0.52	< 0.69	< 0.45	< 0.45	< 0.52	< 0.69	< 0.45	< 0.52	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.48	< 0.48	< 0.65	< 0.34	< 0.34	< 0.48	< 0.65	< 0.34	< 0.34	< 0.48	< 0.65	< 0.34	< 0.48	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 1.1	< 1.1	< 0.42	< 0.3	< 0.3	< 1.1	< 0.42	< 0.3	< 0.3	< 1.1	< 0.42	< 0.3	< 1.1	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.65	< 0.65	< 0.46	< 0.4	< 0.4	< 0.65	< 0.46	< 0.4	< 0.4	< 0.65	< 0.46	< 0.4	< 0.65	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 2.7	< 2.7	< 0.83	< 1.8	< 1.8	< 2.7	< 0.83	< 1.8	< 1.8	< 2.7	< 0.83	< 1.8	< 2.7	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 1.7	< 1.7	< 1.29	< 0.98	< 0.98	< 1.7	< 1.29	< 0.98	< 0.98	< 1.7	< 1.29	< 0.98	< 1.7	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 1.6	< 1.6	< 1.14	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 1.6	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 1.4	< 1.4	< 1.88	< 0.88	< 0.88	< 1.4	< 1.88	< 0.88	< 0.88	< 1.4	< 1.88	< 0.88	< 1.4	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.63	< 0.63	< 0.34	< 0.44	< 0.44	< 0.63	< 0.34	< 0.44	< 0.44	< 0.63	< 0.34	< 0.44	< 0.63	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.46	< 0.46	< 0.34	< 0.36	< 0.36	< 0.46	< 0.34	< 0.36	< 0.36	< 0.46	< 0.34	< 0.36	< 0.46	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.48	< 0.48	< 0.45	< 0.41	< 0.41	< 0.48	< 0.45	< 0.41	< 0.41	< 0.48	< 0.45	< 0.41	< 0.48	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.43	< 0.43	< 0.39	< 0.32	< 0.32	< 0.43	< 0.39	< 0.32	< 0.32	< 0.43	< 0.39	< 0.32	< 0.43	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.5	< 1.5	< 0.91	< 1.4	< 1.4	< 1.5	< 0.91	< 1.4	< 1.4	< 1.5	< 0.91	< 1.4	< 1.5	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.52	< 0.52	< 0.45	< 0.28	< 0.28	< 0.52	< 0.45	< 0.28	< 0.28	< 0.52	< 0.45	< 0.28	< 0.52	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.42	< 0.42	< 0.49	< 0.33	< 0.33	< 0.42	< 0.49	< 0.33	< 0.33	< 0.42	< 0.49	< 0.33	< 0.42	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.49	< 0.49	< 0.42	< 0.3	< 0.3	< 0.49	< 0.42	< 0.3	< 0.3	< 0.49	< 0.42	< 0.3	< 0.49	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 3.1	< 3.1	NA	< 0.36	< 0.36	< 3.1	NA	< 0.36	< 0.36	< 3.1	NA	< 0.36	< 3.1	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.4	< 0.4	< 0.36	< 0.21	< 0.21	< 0.4	< 0.36	< 0.21	< 0.21	< 0.4	< 0.36	< 0.21	< 0.4	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.63	< 0.63	< 0.35	< 0.21	< 0.21	< 0.63	< 0.35	< 0.21	< 0.21	< 0.63	< 0.35	< 0.21	< 0.63	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.44	< 0.44	< 0.17	< 0.24	< 0.24	< 0.44	< 0.17	< 0.24	< 0.24	< 0.44	< 0.17	< 0.24	< 0.44	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.48	< 0.48	< 0.43	< 0.32	< 0.32	< 0.48	< 0.43	< 0.32	< 0.32	< 0.48	< 0.43	< 0.32	< 0.48	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.46	< 0.46	< 0.31	< 0.37	< 0.37	< 0.46	< 0.31	< 0.37	< 0.37	< 0.46	< 0.31	< 0.37	< 0.46	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.46	< 0.46	< 0.49	< 0.35	< 0.35	< 0.46	< 0.49	< 0.35	< 0.35	< 0.46	< 0.49	< 0.35	< 0.46	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.51	< 0.51	< 0.21	< 0.33	< 0.33	< 0.51	< 0.21	< 0.33	< 0.33	< 0.51	< 0.21	< 0.33	< 0.51	< 0.21
Chlorobenzene	ug/l	100	20	< 0.46	< 0.46	< 0.27	< 0.24	< 0.24	< 0.46	< 0.27	< 0.24	< 0.24	< 0.46	< 0.27	< 0.24	< 0.46	< 0.27
Chloroethane	ug/l	400	80	< 0.65	< 0.65	< 0.5	< 0.63	< 0.63	< 0.65	< 0.5	< 0.63	< 0.63	< 0.65	< 0.5	< 0.63	< 0.65	< 0.5
Chloroform	ug/l	6	0.6	< 0.43	< 0.43	< 0.96	< 0.28	< 0.28	< 0.43	< 0.96	0.28 J	< 0.28	< 0.43	< 0.96	< 0.28	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 1.9	< 1.9	< 1.3	< 0.81	< 0.81	< 1.9	< 1.3	< 0.81	< 0.81	< 1.9	< 1.3	< 0.81	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	< 0.45	< 0.45	< 0.41	< 0.38	< 0.38	< 0.45	< 0.41	< 0.38	< 0.38	< 0.45	< 0.41	< 0.38	< 0.45	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	< 0.21	NA	NA	NA	< 0.21	NA	NA	NA	< 0.21	NA	NA	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.87	< 0.87	< 0.38	< 0.44	< 0.44	< 0.87	< 0.38	< 0.44	< 0.44	< 0.87	< 0.38	< 0.44	< 0.87	< 0.38
Ethylbenzene	ug/l	700	140	< 0.71	< 0.71	< 0.2	< 0.55	< 0.55	< 0.71	< 0.2	< 0.55	< 0.55	< 0.71	< 0.2	< 0.55	< 0.71	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 2.2	< 2.2	< 1.47	< 1.5	< 1.5	< 2.2	< 1.47	< 1.5	< 1.5	< 2.2	< 1.47	< 1.5	< 2.2	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.44	< 0.44	< 0.26	< 0.23	< 0.23	< 0.44	< 0.26	< 0.23	< 0.23	< 0.44	< 0.26	< 0.23	< 0.44	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.82	< 0.82	< 0.29	< 0.3	< 0.3	< 0.82	< 0.29	< 0.3	< 0.3	< 0.82	< 0.29	< 0.3	< 0.82	< 0.29
m,p-Xylenes	ug/l	2000	400	< 2.2	< 2.2	< 1.56	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 2.2	< 1.56
Methylene Chloride	ug/l	5	0.5	< 1.3	< 1.3	< 0.94	< 0.5	< 0.5	< 1.3	< 0.94	< 0.5	< 0.5	< 1.3	< 0.94	< 0.5	< 1.3	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 1.1	< 1.1	< 0.82	< 0.23	< 0.23	< 1.1	< 0.82	< 0.23	< 0.23	< 1.1	< 0.82	< 0.23	< 1.1	< 0.82
Naphthalene	ug/l	100	10	< 1.6	< 1.6	< 2.17	< 1.7	< 1.7	< 1.6	< 2.17	< 1.7	< 1.7	< 1.6	< 2.17	< 1.7	< 1.6	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 1	< 1	< 0.34	< 0.35	< 0.35	< 1	< 0.34	< 0.35	< 0.35	< 1	< 0.34	< 0.35	< 1	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.77	< 0.77	< 0.19	< 0.25	< 0.25	< 0.77	< 0.19	< 0.25	< 0.25	< 0.77	< 0.19	< 0.25	< 0.77	< 0.19
o-Xylene	ug/l	2000	400	< 0.9	< 0.9	< 0.39	< 0.63	< 0.63	< 0.9	< 0.39	< 0.63	< 0.63	< 0.9	< 0.39	< 0.63	< 0.9	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 1.1	< 1.1	< 0.28	< 0.31	< 0.31	< 1.1	< 0.28	< 0.31	< 0.31	< 1.1	< 0.28	< 0.31	< 1.1	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 1.2	< 1.2	< 0.24	< 0.33	< 0.33	< 1.2	< 0.24	< 0.33	< 0.33	< 1.2	< 0.24	< 0.33	< 1.2	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 1.1	< 1.1	< 0.39	< 0.36	< 0.36	< 1.1	< 0.39	< 0.36	< 0.36	< 1.1	< 0.39	< 0.36	< 1.1	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.49	< 0.49	< 0.48	< 0.33	< 0.33	< 0.49	< 0.48	< 0.33	< 0.33	< 0.49	< 0.48	< 0.33	< 0.49	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.44	< 0.44	< 0.67	< 0.69	< 0.69	< 0.44	< 0.67	< 0.69	< 0.69	< 0.44	< 0.67	< 0.69	< 0.44	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 1.6	< 1.6	< 1.14	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 1.6	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.54	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	< 0.42	NA	NA	NA	< 0.42	NA	NA	NA	< 0.42	NA	NA	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.47	< 0.47	< 0.45	< 0.33	< 0.33	< 0.47	< 0.45	< 0.33	< 0.33	< 0.47	< 0.45	< 0.33	< 0.47	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.87	< 0.87	< 0.64	< 0.71	< 0.71	< 0.87	< 0.64	< 0.71	< 0.71	< 0.87	< 0.64	< 0.71	< 0.87	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.17	< 0.17	< 0.19	< 0.18	< 0.18	< 0.17	< 0.19	< 0.18	< 0.18	< 0.17	< 0.19	< 0.18	< 0.17	< 0.19
Xylene (Total)	ug/l	2000	400	< 2.2	< 2.2	< 1.56	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 2.2	< 1.56

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3504 CTH CR			3523 CTH CR				3533 CTH CR				3611 CTH CR		
				Replacement Potable Well													
Analyte	Units	ES[1]	PAL[2]	10/24/16 Basement	11/8/16 Basement	2/23/17 Basement	1/3/14 Basement	6/3/14 Basement	10/14/15 Basement	10/25/17 Basement	1/6/14 Basement	6/3/14 Basement	3/30/16 Basement	10/27/17 Basement	5/30/14 Outside Spigot	10/5/16 Outside Spigot	10/25/17 Outside Spigot
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	1380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	**12.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	2330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	NA	NA	NA	506	506	567	NA	739	885	NA	NA	931	NA	NA
Dissolved Oxygen	ppm	NL	NL	NA	NA	NA	2.96	2.96	4.69	NA	5.91	1.85	NA	NA	3.95	NA	NA
ORP	mV	NL	NL	NA	NA	NA	187	187	-101.9	NA	157.2	138	NA	NA	166	NA	NA
pH	SU	NL	NL	NA	NA	NA	7.93	7.93	7.5	NA	7.49	6.84	NA	NA	6.98	NA	NA
Temperature	deg C	NL	NL	NA	NA	NA	11.71	11.71	11.29	NA	9.92	12.5	NA	NA	10.3	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3618 CTH CR											3626 CTH CR			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**1/3/14 Kitchen Sink**	**5/29/14 Kitchen Sink**	**8/25/14 Kitchen Sink**	**11/10/14 Kitchen Sink**	**2/23/15 Kitchen Sink**	**10/14/15 Pressure Tank**	**3/30/16 Kitchen Sink**	**10/6/16 Kitchen Sink**	**5/30/17 Kitchen Sink**	**10/25/17 Kitchen Sink**	**5/21/18 Kitchen Sink**	**12/5/13 Bathroom**	**5/30/14 Bathroom**	**10/14/15 Bathroom**	**10/27/17 Bathroom**
Volatile Organic Compounds (VOCs):																		
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35	< 0.33	< 0.33	< 0.48	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33	< 0.33	< 0.33	< 0.84	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3	< 0.45	< 0.45	< 0.52	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42	< 0.34	< 0.34	< 0.48	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36	< 0.3	< 0.3	< 1.1	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.4	< 0.4	< 0.65	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71	< 1.8	< 1.8	< 2.7	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15	< 0.98	< 0.98	< 1.7	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8	< 2.2	< 2.2	< 1.6	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96	< 0.88	< 0.88	< 1.4	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.44	< 0.44	< 0.63	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86	< 0.36	< 0.36	< 0.46	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.41	< 0.41	< 0.48	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44	< 0.32	< 0.32	< 0.43	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63	< 1.4	< 1.4	< 1.5	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85	< 0.28	< 0.28	< 0.52	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3	< 0.33	< 0.33	< 0.42	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7	< 0.3	< 0.3	< 0.49	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	< 0.36	< 0.36	< 3.1	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31	< 0.21	< 0.21	< 0.4	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26	< 0.21	< 0.21	< 0.63	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.24	< 0.24	< 0.44	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44	< 0.32	< 0.32	< 0.48	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33	< 0.37	< 0.37	< 0.46	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45	< 0.35	< 0.35	< 0.46	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31	< 0.33	< 0.33	< 0.51	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.24	< 0.24	< 0.46	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61	< 0.63	< 0.63	< 0.65	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.28	< 0.28	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.81	< 0.81	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	1.24	1.16 J	0.48 J	0.83 J	0.95 J	0.89 J	1.06 J	0.88 J	0.99 J	0.95 J	1.23	< 0.38	< 0.38	< 0.45	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26	NA	NA	NA	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32	< 0.44	< 0.44	< 0.87	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26	< 0.55	< 0.55	< 0.71	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34	< 1.5	< 1.5	< 2.2	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21	< 0.23	< 0.23	< 0.44	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78	< 0.3	< 0.3	< 0.82	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43	< 0.69	< 0.69	< 2.2	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 0.5	< 0.5	< 1.3	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28	< 0.23	< 0.23	< 1.1	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1	< 1.7	< 1.7	< 1.6	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71	< 0.35	< 0.35	< 1	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61	< 0.25	< 0.25	< 0.77	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29	< 0.63	< 0.63	< 0.9	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24	< 0.31	< 0.31	< 1.1	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79	< 0.33	< 0.33	< 1.2	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25	< 0.36	< 0.36	< 1.1	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38	< 0.33	< 0.33	< 0.49	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.69	< 0.69	< 0.44	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA	< 2.2	< 2.2	< 1.6	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.35	< 0.35	< 0.54	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32	NA	NA	NA	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3	< 0.33	< 0.33	< 0.47	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35	< 0.71	< 0.71	< 0.87	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	< 0.18	< 0.18	< 0.17	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA	< 0.69	< 0.69	< 2.2	< 1.56

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3618 CTH CR											3626 CTH CR			
Analyte	**Units**	**ES[1]**	**PAL[2]**	**1/3/14 Kitchen Sink**	**5/29/14 Kitchen Sink**	**8/25/14 Kitchen Sink**	**11/10/14 Kitchen Sink**	**2/23/15 Kitchen Sink**	**10/14/15 Pressure Tank**	**3/30/16 Kitchen Sink**	**10/6/16 Kitchen Sink**	**5/30/17 Kitchen Sink**	**10/25/17 Kitchen Sink**	**5/21/18 Kitchen Sink**	**12/5/13 Bathroom**	**5/30/14 Bathroom**	**10/14/15 Bathroom**	**10/27/17 Bathroom**
Polycarbonated Biphenyls (PCBs):																		
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																		
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																		
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																		
Conductivity	uS/cm	NL	NL	543	520	658	674	674	649	NA	NA	NA	NA	NA	519	500	578	578
Dissolved Oxygen	ppm	NL	NL	5.32	2.24	0.8	1.44	1.44	1.49	NA	NA	NA	NA	NA	5.73	1.83	2.52	2.52
ORP	mV	NL	NL	147.6	136	238	-102.5	-102.5	-14.7	NA	NA	NA	NA	NA	90	143	-110.8	-110.8
pH	SU	NL	NL	7.02	7.8	7.87	7.95	7.95	7.79	NA	NA	NA	NA	NA	842	7.58	7.86	7.86
Temperature	deg C	NL	NL	9.02	7.8	18.3	11.33	11.33	16.22	NA	NA	NA	NA	NA	8.69	11.98	11.99	11.99

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3627 CTH CR				3904 CTH CR				4024 CTH CR			4101 CTH CR		4125 CTH CR	
Analyte	Units	ES[1]	PAL[2]	12/5/13 Basement	5/29/14 Basement	3/30/16 Basement	10/25/17 Basement	12/5/13 Pressure Tank	5/28/14 Pressure Tank	5/30/17 Outside Spigot	05/30/17 (DUP) Outside Spigot	12/12/13 Spigot in Barn	5/28/14 Spigot in Barn	10/6/16 Pressure Tank	5/29/14 Pressure Tank	10/14/15 Pressure Tank	5/31/17 Pressure Tank	05/31/17 (DUP) Pressure Tank
Volatile Organic Compounds (VOCs):																		
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.47	< 0.33	< 0.33	< 0.47	< 0.47	< 0.33	< 0.33	< 0.48	< 0.33	< 0.48	< 0.47	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.35	< 0.33	< 0.33	< 0.35	< 0.35	< 0.33	< 0.33	< 0.84	< 0.33	< 0.84	< 0.35	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.69	< 0.45	< 0.45	< 0.69	< 0.69	< 0.45	< 0.45	< 0.52	< 0.45	< 0.52	< 0.69	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.65	< 0.34	< 0.34	< 0.65	< 0.65	< 0.34	< 0.34	< 0.48	< 0.34	< 0.48	< 0.65	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 0.42	< 0.3	< 0.3	< 0.42	< 0.42	< 0.3	< 0.3	< 1.1	< 0.3	< 1.1	< 0.42	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.46	< 0.4	< 0.4	< 0.46	< 0.46	< 0.4	< 0.4	< 0.65	< 0.4	< 0.65	< 0.46	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 0.83	< 1.8	< 1.8	< 0.83	< 0.83	< 1.8	< 1.8	< 2.7	< 1.8	< 2.7	< 0.83	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.29	< 0.98	< 0.98	< 1.29	< 1.29	< 0.98	< 0.98	< 1.7	< 0.98	< 1.7	< 1.29	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 1.14	< 1.14	< 2.2	< 2.2	< 1.6	< 2.2	< 1.6	< 1.14	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.88	< 0.88	< 0.88	< 1.88	< 1.88	< 0.88	< 0.88	< 1.4	< 0.88	< 1.4	< 1.88	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.34	< 0.44	< 0.44	< 0.34	< 0.34	< 0.44	< 0.44	< 0.63	< 0.44	< 0.63	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.34	< 0.36	< 0.36	< 0.34	< 0.34	< 0.36	< 0.36	< 0.46	< 0.36	< 0.46	< 0.34	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.48	< 0.45	< 0.41	< 0.41	< 0.45	< 0.45	< 0.41	< 0.41	< 0.48	< 0.41	< 0.48	< 0.45	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.39	< 0.32	< 0.32	< 0.39	< 0.39	< 0.32	< 0.32	< 0.43	< 0.32	< 0.43	< 0.39	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 0.91	< 1.4	< 1.4	< 0.91	< 0.91	< 1.4	< 1.4	< 1.5	< 1.4	< 1.5	< 0.91	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.45	< 0.28	< 0.28	< 0.45	< 0.45	< 0.28	< 0.28	< 0.52	< 0.28	< 0.52	< 0.45	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.49	< 0.33	< 0.33	< 0.49	< 0.49	< 0.33	< 0.33	< 0.42	< 0.33	< 0.42	< 0.49	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.42	< 0.3	< 0.3	< 0.42	< 0.42	< 0.3	< 0.3	< 0.49	< 0.3	< 0.49	< 0.42	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	NA	< 0.36	< 0.36	NA	NA	< 0.36	< 0.36	< 3.1	< 0.36	< 3.1	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.36	< 0.21	< 0.21	< 0.36	< 0.36	< 0.21	< 0.21	< 0.4	< 0.21	< 0.4	< 0.36	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.35	< 0.21	< 0.21	< 0.35	< 0.35	< 0.21	< 0.21	< 0.63	< 0.21	< 0.63	< 0.35	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.17	< 0.24	< 0.24	< 0.17	< 0.17	< 0.24	< 0.24	< 0.44	< 0.24	< 0.44	< 0.17	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.43	< 0.32	< 0.32	< 0.43	< 0.43	< 0.32	< 0.32	< 0.48	< 0.32	< 0.48	< 0.43	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.31	< 0.37	< 0.37	< 0.31	< 0.31	< 0.37	< 0.37	< 0.46	< 0.37	< 0.46	< 0.31	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.49	< 0.35	< 0.35	< 0.49	< 0.49	< 0.35	< 0.35	< 0.46	< 0.35	< 0.46	< 0.49	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.51	< 0.21	< 0.33	< 0.33	< 0.21	< 0.21	< 0.33	< 0.33	< 0.51	< 0.33	< 0.51	< 0.21	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.27	< 0.24	< 0.24	< 0.27	< 0.27	< 0.24	< 0.24	< 0.46	< 0.24	< 0.46	< 0.27	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.5	< 0.63	< 0.63	< 0.5	< 0.5	< 0.63	< 0.63	< 0.65	< 0.63	< 0.65	< 0.5	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.96	< 0.28	< 0.28	< 0.96	< 0.96	< 0.28	< 0.28	< 0.43	< 0.28	< 0.43	< 0.96	< 0.96
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.3	< 0.81	< 0.81	< 1.3	< 1.3	< 0.81	< 0.81	< 1.9	< 0.81	< 1.9	< 1.3	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.45	< 0.41	< 0.38	< 0.38	< 0.41	< 0.41	< 0.38	< 0.38	< 0.45	< 0.38	< 0.45	< 0.41	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	< 0.21	NA	NA	< 0.21	< 0.21	NA	NA	NA	NA	NA	< 0.21	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.45	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.38	< 0.44	< 0.44	< 0.38	< 0.38	< 0.44	< 0.44	< 0.87	< 0.44	< 0.87	< 0.38	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.2	< 0.55	< 0.55	< 0.2	< 0.2	< 0.55	< 0.55	< 0.71	< 0.55	< 0.71	< 0.2	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 1.47	< 1.5	< 1.5	< 1.47	< 1.47	< 1.5	< 1.5	< 2.2	< 1.5	< 2.2	< 1.47	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.26	< 0.23	< 0.23	< 0.26	< 0.26	< 0.23	< 0.23	< 0.44	< 0.23	< 0.44	< 0.26	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.29	< 0.3	< 0.3	< 0.29	< 0.29	< 0.3	< 0.3	< 0.82	< 0.3	< 0.82	< 0.29	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 1.56	< 1.56	< 0.69	< 0.69	< 2.2	< 0.69	< 2.2	< 1.56	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 0.94	< 0.5	< 0.5	< 0.94	< 0.94	< 0.5	< 0.5	< 1.3	< 0.5	< 1.3	< 0.94	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 0.82	< 0.23	< 0.23	< 0.82	< 0.82	< 0.23	< 0.23	< 1.1	< 0.23	< 1.1	< 0.82	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 2.17	< 1.7	< 1.7	< 2.17	< 2.17	< 1.7	< 1.7	< 1.6	< 1.7	< 1.6	< 2.17	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 0.34	< 0.35	< 0.35	< 0.34	< 0.34	< 0.35	< 0.35	< 1	< 0.35	< 1	< 0.34	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.19	< 0.25	< 0.25	< 0.19	< 0.19	< 0.25	< 0.25	< 0.77	< 0.25	< 0.77	< 0.19	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.39	< 0.63	< 0.63	< 0.39	< 0.39	< 0.63	< 0.63	< 0.9	< 0.63	< 0.9	< 0.39	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 0.28	< 0.31	< 0.31	< 0.28	< 0.28	< 0.31	< 0.31	< 1.1	< 0.31	< 1.1	< 0.28	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 0.24	< 0.33	< 0.33	< 0.24	< 0.24	< 0.33	< 0.33	< 1.2	< 0.33	< 1.2	< 0.24	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 0.39	< 0.36	< 0.36	< 0.39	< 0.39	< 0.36	< 0.36	< 1.1	< 0.36	< 1.1	< 0.39	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.49	< 0.48	< 0.33	< 0.33	< 0.48	< 0.48	< 0.33	< 0.33	< 0.49	< 0.33	< 0.49	< 0.48	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.67	< 0.69	< 0.69	< 0.67	< 0.67	< 0.69	< 0.69	< 0.44	< 0.69	< 0.44	< 0.67	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.14	< 2.2	< 2.2	< 1.14	< 1.14	< 2.2	< 2.2	< 1.6	< 2.2	< 1.6	< 1.14	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.35	< 0.54	< 0.35	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	< 0.42	NA	NA	< 0.42	< 0.42	NA	NA	NA	NA	NA	< 0.42	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.45	< 0.33	< 0.33	< 0.45	< 0.45	< 0.33	< 0.33	< 0.47	< 0.33	< 0.47	< 0.45	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.64	< 0.71	< 0.71	< 0.64	< 0.64	< 0.71	< 0.71	< 0.87	< 0.71	< 0.87	< 0.64	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.19	< 0.18	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17	< 0.19	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 1.56	< 0.69	< 0.69	< 1.56	< 1.56	< 0.69	< 0.69	< 2.2	< 0.69	< 2.2	< 1.56	< 1.56

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3627 CTH CR				3904 CTH CR				4024 CTH CR			4101 CTH CR		4125 CTH CR	
Analyte	Units	ES[1]	PAL[2]	12/5/13 Basement	5/29/14 Basement	3/30/16 Basement	10/25/17 Basement	12/5/13 Pressure Tank	5/28/14 Pressure Tank	5/30/17 Outside Spigot	05/30/17 (DUP) Outside Spigot	12/12/13 Spigot in Barn	5/28/14 Spigot in Barn	10/6/16 Pressure Tank	5/29/14 Pressure Tank	10/14/15 Pressure Tank	5/31/17 Pressure Tank	05/31/17 (DUP) Pressure Tank
Polycarbonated Biphenyls (PCBs):																		
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																		
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																		
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																		
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																		
Conductivity	uS/cm	NL	NL	655	861	NA	NA	828	905	NA	NA	599	565	NA	598	687	NA	NA
Dissolved Oxygen	ppm	NL	NL	4.92	1.46	NA	NA	5.32	3.84	NA	NA	4.71	1.44	NA	2.3	2.54	NA	NA
ORP	mV	NL	NL	91.3	152	NA	NA	96.9	138	NA	NA	99	124	NA	126	-75	NA	NA
pH	SU	NL	NL	8.49	7.5	NA	NA	8.05	7.88	NA	NA	8.32	7.65	NA	7.42	7.65	NA	NA
Temperature	deg C	NL	NL	12.16	15.1	NA	NA	8.43	11.5	NA	NA	5.6	12.3	NA	12.4	12.93	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4002 Thunder Ridge Rd										
				Original Potable Well							Replacement Potable Well			
Analyte	Units	ES[1]	PAL[2]	1/3/14 Pressure Tank	8/25/14 Pressure Tank	10/13/15 Pressure Tank	10/13/15 (DUP) Pressure Tank	10/27/15 Pressure Tank	3/31/16 Pressure Tank	03/31/16 (DUP) Pressure Tank	5/23/16 Pressure Tank	6/2/16 Pressure Tank	6/23/16 Pressure Tank	10/5/16 Pressure Tank
Volatile Organic Compounds (VOCs):														
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.67	1.29	1.3 J	1.14 J	1.26 J	0.68 J	1.03 J	< 0.45	< 0.45	< 0.45	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	**0.2 J**	**0.18 J**	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4002 Thunder Ridge Rd										
				Original Potable Well							Replacement Potable Well			
Analyte	Units	ES[1]	PAL[2]	1/3/14 Pressure Tank	8/25/14 Pressure Tank	10/13/15 Pressure Tank	10/13/15 (DUP) Pressure Tank	10/27/15 Pressure Tank	3/31/16 Pressure Tank	03/31/16 (DUP) Pressure Tank	5/23/16 Pressure Tank	6/2/16 Pressure Tank	6/23/16 Pressure Tank	10/5/16 Pressure Tank
Polycarbonated Biphenyls (PCBs):														
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:														
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	1753	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	**14.5**	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:														
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	2450	NA
Field Screening Measurements:														
Conductivity	uS/cm	NL	NL	583	740	774	774	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	5.32	3.49	1.42	1.42	NA	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	159	237	-135.8	-135.8	NA	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.21	7.32	7.45	7.45	NA	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	8.51	13.1	12.74	12.74	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4005 Thunder Ridge Rd													
				Original Potable Well									Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	5/29/14 Outside Spigot	8/26/14 Outside Spigot	11/11/14 Outside Spigot	2/23/15 Outside Spigot	10/14/15 Outside Spigot	3/30/16 Outside Spigot	10/10/16 Outside Spigot	10/24/16 Outside Spigot	11/8/16 Outside Spigot	5/30/17 Pressure Tank	5/30/17 Pressure Tank	6/22/17 Pressure Tank	8/17/17 Pressure Tank	03/05/18 Pressure Tank
Volatile Organic Compounds (VOCs):																	
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.47	NA
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.35	< 0.35	NA
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.69	< 0.69	NA
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.65	< 0.65	NA
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.42	< 0.42	NA
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.46	NA
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 0.83	< 0.83	NA
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.29	< 1.29	NA
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 1.14	< 1.14	NA
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 1.88	< 1.88	NA
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.34	NA
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.34	< 0.34	NA
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.45	NA
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.39	< 0.39	NA
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.91	< 0.91	NA
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.45	< 0.45	NA
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.49	< 0.49	NA
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.42	< 0.42	NA
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.36	< 0.36	NA
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.35	< 0.35	NA
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.17	NA
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.43	< 0.43	NA
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.31	< 0.31	NA
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.49	< 0.49	NA
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.21	< 0.21	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.27	NA
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.5	< 0.5	NA
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.96	NA
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 1.3	NA
cis-1,2-Dichloroethene	ug/l	70	7	0.83 J	0.9 J	< 0.38	0.81 J	0.91 J	0.97 J	1.35 J	1.1 J	0.66 J	< 0.41	< 0.41	< 0.41	< 0.41	NA
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.21	< 0.21	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	NA
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.38	< 0.38	NA
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.2	< 0.2	NA
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.47	< 1.47	NA
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.26	< 0.26	NA
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.29	< 0.29	NA
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 1.56	< 1.56	NA
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 0.94	NA
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.82	< 0.82	NA
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.17	< 2.17	NA
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.34	< 0.34	NA
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.19	< 0.19	NA
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.39	< 0.39	NA
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.28	< 0.28	NA
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.24	< 0.24	NA
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.39	< 0.39	NA
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.48	< 0.48	NA
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.67	NA
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	NA	< 1.14	< 1.14	< 1.14	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	NA
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.42	< 0.42	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.45	< 0.45	NA
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.64	< 0.64	NA
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	**0.29 J**	< 0.17	< 0.17	< 0.19	< 0.19	< 0.19	< 0.19	NA
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	NA	< 1.56	< 1.56	< 1.56	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4005 Thunder Ridge Rd													
				Original Potable Well									Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	5/29/14 Outside Spigot	8/26/14 Outside Spigot	11/11/14 Outside Spigot	2/23/15 Outside Spigot	10/14/15 Outside Spigot	3/30/16 Outside Spigot	10/10/16 Outside Spigot	10/24/16 Outside Spigot	11/8/16 Outside Spigot	5/30/17 Pressure Tank	5/30/17 Pressure Tank	6/22/17 Pressure Tank	8/17/17 Pressure Tank	03/05/18 Pressure Tank
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 8.4
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.3
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.2
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**317**
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.4
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	552
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.9
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2.3
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.9
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.73
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	1873	1573	NA	1696	1860
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9.83**	**6.98**	NA	**4.05**	**4.83**
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5.9
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	113
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**11.9**
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 7.2
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.67
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4240
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 8.4
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	43.5
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29000
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9**
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 7
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5.24**	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	2706	2700	NA	2714	2700
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	663	781	774	744	778	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	1.43	1.35	1.66	8.33	4.65	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	122	199	-120.9	-195.4	-73.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.75	8.06	8	8.06	7.23	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	12	14.9	9.71	8.1	10.7	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4010 Thunder Ridge Rd											
				Original Potable Well							Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	5/28/14 Outside Spigot	8/26/14 Outside Spigot	2/24/15 Pressure Tank	10/20/15 Outside Spigot	3/31/16 Outside Spigot	10/7/16 Outside Spigot	10/24/16 Outside Spigot	5/31/17 Outside Spigot	5/31/17 Outside Spigot	6/22/17 Pressure Tank	8/17/17 Pressure Tank	03/05/18 Pressure Tank
Volatile Organic Compounds (VOCs):															
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.47	NA
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.35	< 0.35	NA
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.69	< 0.69	NA
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.65	< 0.65	NA
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.42	< 0.42	NA
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.46	NA
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 0.83	< 0.83	NA
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.29	< 1.29	NA
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 1.14	< 1.14	NA
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 1.88	< 1.88	NA
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.34	NA
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.34	< 0.34	NA
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.45	NA
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.39	< 0.39	NA
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.91	< 0.91	NA
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.45	< 0.45	NA
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.49	< 0.49	NA
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.42	< 0.42	NA
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.36	< 0.36	NA
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.35	< 0.35	NA
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.17	NA
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.43	< 0.43	NA
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.31	< 0.31	NA
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.49	< 0.49	NA
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.21	< 0.21	NA
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.27	NA
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.5	< 0.5	NA
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.96	NA
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 1.3	NA
cis-1,2-Dichloroethene	ug/l	70	7	1.37	1.18 J	1.43	1.27 J	1.47	1.27 J	1.42	< 0.41	< 0.41	< 0.41	< 0.41	NA
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.21	< 0.21	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	NA
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.38	< 0.38	NA
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.2	< 0.2	NA
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.47	< 1.47	NA
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.26	< 0.26	NA
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.29	< 0.29	NA
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 1.56	< 1.56	NA
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 0.94	NA
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.82	< 0.82	NA
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.17	< 2.17	NA
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.34	< 0.34	NA
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.19	< 0.19	NA
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.39	< 0.39	NA
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.28	< 0.28	NA
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.24	< 0.24	NA
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.39	< 0.39	NA
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.48	< 0.48	NA
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.67	NA
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	NA	< 1.14	< 1.14	< 1.14	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	NA
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.42	< 0.42	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.45	< 0.45	NA
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.64	< 0.64	NA
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	**0.27 J**	**0.2 J**	< 0.19	< 0.19	< 0.19	< 0.19	NA
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 2.2	NA	< 1.56	< 1.56	< 1.56	NA

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4010 Thunder Ridge Rd												
				Original Potable Well							Replacement Potable Well				
Analyte	Units	ES[1]	PAL[2]	5/28/14 Outside Spigot	8/26/14 Outside Spigot	2/24/15 Pressure Tank	10/20/15 Outside Spigot	3/31/16 Outside Spigot	10/7/16 Outside Spigot	10/24/16 Outside Spigot	5/31/17 Outside Spigot	5/31/17 Outside Spigot	6/22/17 Pressure Tank	8/17/17 Pressure Tank	03/05/18 Pressure Tank
Polycarbonated Biphenyls (PCBs):															
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:															
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 8.4
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.8
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.2
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**262**
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.4
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	558
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.9
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2.3
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.3
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.6
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	1588	1576	NA	1732	1888
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	**9.77**	**3.96**	NA	**3.51**	**4.82**
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5.9
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	113
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.8
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10.9**
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3.4
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 7.2
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.52
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4890
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 8.4
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68.4
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28200
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10.2**
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	25.2
Dissolved Metals:															
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	**8.72**	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:															
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	2658	2652	NA	2702	2630
Field Screening Measurements:															
Conductivity	uS/cm	NL	NL	687	742	746	0.762	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	0.99	2.35	6.62	4.18	NA	NA	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	118	245	-158	-99.1	NA	NA	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.97	7.85	8.15	7.71	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	14.2	13.3	8.83	12.79	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4027 Thunder Ridge Rd												
Analyte	**Units**	**ES[1]**	**PAL[2]**	**5/29/14 Outside Spigot**	**11/11/14 Outside Spigot**	**11/11/14 (DUP) Outside Spigot**	**2/24/15 Pressure Tank**	**10/13/15 Pressure Tank**	**3/31/16 Pressure Tank**	**10/6/16 Pressure Tank**	**10/06/16 (DUP) Pressure Tank**	**5/30/17 Pressure Tank**	**10/25/17 Pressure Tank**	**5/21/18 Pressure Tank**	**5/31/18 Pressure Tank**
Volatile Organic Compounds (VOCs):															
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35	< 0.35
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3	< 0.3
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42	< 0.42
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36	< 0.36
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.42
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71	< 1.71
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15	< 1.15
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8	< 0.8
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96	< 2.96
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86	< 0.86
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.25
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44	< 0.44
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63	< 0.63
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85	< 0.85
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7	< 0.7
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31	< 0.31
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26	< 0.26
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.22
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44	< 0.44
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33	< 0.33
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45	< 0.45
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31	< 0.31
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.26
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61	< 0.61
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.59 J	0.6 J	0.53 J	0.48 J	0.67 J	0.71 J	0.96 J	0.77 J	0.87 J	1.08 J	1.32	1 J
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26	< 0.26
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32	< 0.32
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26	< 0.26
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34	< 1.34
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21	< 0.21
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78	< 0.78
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43	< 0.43
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 1.32
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28	< 0.28
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1	< 2.1
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71	< 0.71
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61	< 0.61
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29	< 0.29
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24	< 0.24
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79	< 0.79
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25	< 0.25
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38	< 0.38
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.19
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.34
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32	< 0.32
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3	< 0.3
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	**0.28 J**	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4027 Thunder Ridge Rd												
Analyte	**Units**	**ES[1]**	**PAL[2]**	**5/29/14 Outside Spigot**	**11/11/14 Outside Spigot**	**11/11/14 (DUP) Outside Spigot**	**2/24/15 Pressure Tank**	**10/13/15 Pressure Tank**	**3/31/16 Pressure Tank**	**10/6/16 Pressure Tank**	**10/06/16 (DUP) Pressure Tank**	**5/30/17 Pressure Tank**	**10/25/17 Pressure Tank**	**5/21/18 Pressure Tank**	**5/31/18 Pressure Tank**
Polycarbonated Biphenyls (PCBs):															
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:															
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:															
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:															
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:															
Conductivity	uS/cm	NL	NL	702	890	890	1928	820	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	2.1	3.25	3.25	4.48	3.29	NA	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	132	-109.8	-109.8	-150.9	-79.9	NA	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.52	7.95	7.95	7.94	7.25	NA	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	12	11.13	11.13	8.09	11.61	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4101 Thunder Ridge Rd										
Analyte	**Units**	**ES[1]**	**PAL[2]**	**8/26/14 Outside Spigot**	**11/17/14 Outside Spigot**	**3/11/15 Pressure Tank**	**10/14/15 Outside Spigot**	**3/30/16 Outside Spigot**	**11/8/16 Outside Spigot**	**5/30/17 Outside Spigot**	**5/30/17 Outside Spigot**	**5/30/17 Outside Spigot**	**10/25/17 Outside Spigot**	**5/21/18 Outside Spigot**
Volatile Organic Compounds (VOCs):														
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.47	< 0.35
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.35	< 0.35	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.69	< 0.69	< 0.3
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.65	< 0.65	< 0.42
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.42	< 0.42	< 0.36
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.46	< 0.42
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 0.83	< 0.83	< 1.71
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.29	< 1.29	< 1.15
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 1.14	< 1.14	< 0.8
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 1.88	< 1.88	< 2.96
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.34	< 0.34	< 0.86
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.45	< 0.25
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.39	< 0.39	< 0.44
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.91	< 0.91	< 0.63
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.45	< 0.45	< 0.85
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.49	< 0.49	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.42	< 0.42	< 0.7
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.36	< 0.36	< 0.31
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.35	< 0.35	< 0.26
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.17	< 0.22
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.43	< 0.43	< 0.44
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.31	< 0.31	< 0.33
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.49	< 0.49	< 0.45
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.21	< 0.21	< 0.31
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.27	< 0.26
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.5	< 0.5	< 0.61
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	0.73 J	0.63 J	0.76 J	0.87 J	0.71 J	1.02 J	0.73 J	0.7 J	0.68 J	0.84 J	1.32
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.21	< 0.21	< 0.26
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.38	< 0.38	< 0.32
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.2	< 0.2	< 0.26
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.47	< 1.47	< 1.34
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.26	< 0.26	< 0.21
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.29	< 0.29	< 0.78
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 1.56	< 1.56	< 0.43
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 0.94	< 1.32
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.82	< 0.82	< 0.28
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.17	< 2.17	< 2.1
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.34	< 0.34	< 0.71
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.19	< 0.19	< 0.61
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.39	< 0.39	< 0.29
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.28	< 0.28	< 0.24
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.24	< 0.24	< 0.79
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.39	< 0.39	< 0.25
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.48	< 0.48	< 0.38
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.67	< 0.19
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	NA	NA	< 1.14	< 1.14	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.34
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.42	< 0.42	< 0.32
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.45	< 0.45	< 0.3
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.64	< 0.64	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.19	< 0.19	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	NA	NA	< 1.56	< 1.56	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4101 Thunder Ridge Rd											
Analyte	**Units**	**ES[1]**	**PAL[2]**	**8/26/14 Outside Spigot**	**11/17/14 Outside Spigot**	**3/11/15 Pressure Tank**	**10/14/15 Outside Spigot**	**3/30/16 Outside Spigot**	**11/8/16 Outside Spigot**	**5/30/17 Outside Spigot**	**5/30/17 Outside Spigot**	**5/30/17 Outside Spigot**	**10/25/17 Outside Spigot**	**5/21/18 Outside Spigot**
Polycarbonated Biphenyls (PCBs):														
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:														
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:														
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:														
Conductivity	uS/cm	NL	NL	836	777	NA	846	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	1.4	1.24	NA	3.21	NA	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	236	-33.7	NA	-66.8	NA	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.75	7.7	NA	6.91	NA	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	15.4	9.74	NA	10.58	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4111 Thunder Ridge Rd											4127 Thunder Ridge Rd		
Analyte	Units	ES[1]	PAL[2]	8/25/14 Outside Spigot	11/17/14 Outside Spigot	2/23/15 Outside Spigot	10/13/15 Outside Spigot	3/30/16 Pressure Tank	10/10/16 Outside Spigot	5/30/17 Outside Spigot	10/25/17 Outside Spigot	10/25/17 (DUP) Outside Spigot	5/21/18 Pressure Tank	6/5/18 Pressure Tank	12/5/13 Outside Spigot	5/29/14 Outside Spigot	3/30/16 Outside Spigot
Volatile Organic Compounds (VOCs):																	
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.35	< 0.35	< 0.33	< 0.33	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.35	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.69	< 0.3	< 0.3	< 0.45	< 0.45	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.65	< 0.42	< 0.42	< 0.34	< 0.34	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.42	< 0.36	< 0.36	< 0.3	< 0.3	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.46	< 0.42	< 0.42	< 0.4	< 0.4	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 0.83	< 1.71	< 1.71	< 1.8	< 1.8	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.29	< 1.15	< 1.15	< 0.98	< 0.98	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 1.14	< 0.8	< 0.8	< 2.2	< 2.2	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 1.88	< 2.96	< 2.96	< 0.88	< 0.88	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.44	< 0.44	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.34	< 0.86	< 0.86	< 0.36	< 0.36	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.45	< 0.25	< 0.25	< 0.41	< 0.41	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.39	< 0.44	< 0.44	< 0.32	< 0.32	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.91	< 0.63	< 0.63	< 1.4	< 1.4	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.45	< 0.85	< 0.85	< 0.28	< 0.28	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.49	< 0.3	< 0.3	< 0.33	< 0.33	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.42	< 0.7	< 0.7	< 0.3	< 0.3	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	NA	NA	< 0.36	< 0.36	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.36	< 0.31	< 0.31	< 0.21	< 0.21	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.35	< 0.26	< 0.26	< 0.21	< 0.21	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.17	< 0.22	< 0.22	< 0.24	< 0.24	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.43	< 0.44	< 0.44	< 0.32	< 0.32	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.31	< 0.33	< 0.33	< 0.37	< 0.37	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.49	< 0.45	< 0.45	< 0.35	< 0.35	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.21	< 0.31	< 0.31	< 0.33	< 0.33	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.27	< 0.26	< 0.26	< 0.24	< 0.24	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.5	< 0.61	< 0.61	< 0.63	< 0.63	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.96	< 0.26	< 0.26	< 0.28	< 0.28	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 1.3	< 0.54	< 0.54	< 0.81	< 0.81	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	0.41 J	< 0.38	< 0.45	< 0.45	< 0.45	0.56 J	0.56 J	0.65 J	0.6 J	1.05 J	0.55 J	< 0.38	< 0.38	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.21	< 0.26	< 0.26	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.38	< 0.32	< 0.32	< 0.44	< 0.44	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.2	< 0.26	< 0.26	< 0.55	< 0.55	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.47	< 1.34	< 1.34	< 1.5	< 1.5	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.26	< 0.21	< 0.21	< 0.23	< 0.23	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.29	< 0.78	< 0.78	< 0.3	< 0.3	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 1.56	< 0.43	< 0.43	< 0.69	< 0.69	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 0.94	< 1.32	< 1.32	< 0.5	< 0.5	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.82	< 0.28	< 0.28	< 0.23	< 0.23	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.17	< 2.1	< 2.1	< 1.7	< 1.7	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.34	< 0.71	< 0.71	< 0.35	< 0.35	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.19	< 0.61	< 0.61	< 0.25	< 0.25	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.39	< 0.29	< 0.29	< 0.63	< 0.63	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.28	< 0.24	< 0.24	< 0.31	< 0.31	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.24	< 0.79	< 0.79	< 0.33	< 0.33	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.39	< 0.25	< 0.25	< 0.36	< 0.36	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.48	< 0.38	< 0.38	< 0.33	< 0.33	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.67	< 0.19	< 0.19	< 0.69	< 0.69	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	NA	< 1.14	NA	NA	< 2.2	< 2.2	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.34	< 0.34	< 0.35	< 0.35	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.42	< 0.32	< 0.32	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.45	< 0.3	< 0.3	< 0.33	< 0.33	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.64	< 0.35	< 0.35	< 0.71	< 0.71	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.19	**0.21 J**	< 0.2	< 0.18	< 0.18	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56	NA	< 1.56	NA	NA	< 0.69	< 0.69	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4111 Thunder Ridge Rd											4127 Thunder Ridge Rd		
Analyte	Units	ES[1]	PAL[2]	8/25/14 Outside Spigot	11/17/14 Outside Spigot	2/23/15 Outside Spigot	10/13/15 Outside Spigot	3/30/16 Pressure Tank	10/10/16 Outside Spigot	5/30/17 Outside Spigot	10/25/17 Outside Spigot	10/25/17 (DUP) Outside Spigot	5/21/18 Pressure Tank	6/5/18 Pressure Tank	12/5/13 Outside Spigot	5/29/14 Outside Spigot	3/30/16 Outside Spigot
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	809	786	818	827	NA	NA	NA	NA	NA	NA	NA	1033	1046	NA
Dissolved Oxygen	ppm	NL	NL	0.97	5.9	4.31	1.68	NA	NA	NA	NA	NA	NA	NA	5.21	1.33	NA
ORP	mV	NL	NL	236	-41.4	-155.3	-120.9	NA	NA	NA	NA	NA	NA	NA	95	132	NA
pH	SU	NL	NL	7.65	7.99	7.98	7.68	NA	NA	NA	NA	NA	NA	NA	8.24	7.32	NA
Temperature	deg C	NL	NL	12.8	8.88	7.83	13.73	NA	NA	NA	NA	NA	NA	NA	8.53	11.5	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3617(3621) Viebahn St						3701 Viebahn St							3815 Viebahn St				
				(Well Abandoned, City Water Provided)						Original Potable Well (City Water Provided Dec 2016)							Original Potable Well (City Water Provided Dec 2016)				
Analyte	Units	ES[1]	PAL[2]	11/7/14 Pressure Tank	11/19/14 Pressure Tank	2/24/15 Pressure Tank	02/24/15 (DUP) Pressure Tank	10/13/15 Pressure Tank	3/30/16 Pressure Tank	10/29/14 Pressure Tank	11/7/14 Pressure Tank	11/07/14 (DUP) Pressure Tank	2/23/15 Pressure Tank	02/23/15 (DUP) Pressure Tank	10/14/15 Pressure Tank	10/14/15 (DUP) Pressure Tank	11/7/14 Pressure Tank	11/19/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	10/13/15 (DUP) Pressure Tank
Volatile Organic Compounds (VOCs):																					
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.54	< 0.48	< 0.48	< 0.41	< 0.41	< 0.41	< 0.54	< 0.54	< 0.48	< 0.48	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.65	< 0.65	< 0.51	< 0.51	< 0.33	< 0.33	< 0.33	< 0.65	< 0.65	< 0.51	< 0.51	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	1.13 J	1.12 J	0.92 J	0.87 J	1.3 J	1.12 J	1.23	1.18 J	1.29	1.31 J	1.09 J	1.55	1.48	0.74 J	0.94 J	0.9 J	1 J	1.12 J
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	**1.5 J**	**1.17 J**	**1.12 J**	< 1.3	< 1.3	< 1.3	< 1.3	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.35	< 0.35	< 1	< 1	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.74	< 0.74	< 0.49	< 0.49	< 0.33	< 0.33	< 0.33	< 0.74	< 0.74	< 0.49	< 0.49	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87
Vinyl chloride	ug/l	0.2	0.02	**0.48 J**	**0.4 J**	< 0.17	**0.18 J**	**0.23 J**	< 0.17	**0.29 J**	**0.32 J**	**0.49 J**	**0.31 J**	**0.33 J**	**0.34 J**	**0.37 J**	**0.33 J**	**0.31 J**	**0.25 J**	**0.2 J**	**0.32 J**
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.9	< 0.9	< 2.2	< 2.2	< 0.69	< 0.69	< 0.69	< 0.9	< 0.9	< 2.2	< 2.2	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3617(3621) Viebahn St						3701 Viebahn St							3815 Viebahn St				
				(Well Abandoned, City Water Provided)						Original Potable Well (City Water Provided Dec 2016)							Original Potable Well (City Water Provided Dec 2016)				
Analyte	Units	ES[1]	PAL[2]	11/7/14 Pressure Tank	11/19/14 Pressure Tank	2/24/15 Pressure Tank	02/24/15 (DUP) Pressure Tank	10/13/15 Pressure Tank	3/30/16 Pressure Tank	10/29/14 Pressure Tank	11/7/14 Pressure Tank	11/07/14 (DUP) Pressure Tank	2/23/15 Pressure Tank	02/23/15 (DUP) Pressure Tank	10/14/15 Pressure Tank	10/14/15 (DUP) Pressure Tank	11/7/14 Pressure Tank	11/19/14 Pressure Tank	2/23/15 Pressure Tank	10/13/15 Pressure Tank	10/13/15 (DUP) Pressure Tank
Polycarbonated Biphenyls (PCBs):																					
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																					
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																					
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																					
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																					
Conductivity	uS/cm	NL	NL	646	590	511	511	663	NA	630	658	658	618	618	624	624	644	561	664	645	645
Dissolved Oxygen	ppm	NL	NL	3.7	1.93	3.89	3.89	1.67	NA	6.51	4.68	4.68	7.1	7.1	3.3	3.3	2.54	5.32	3.51	5.54	5.54
ORP	mV	NL	NL	-29.2	-147.6	-185.7	-185.7	-123.4	NA	-58.3	13.3	13.3	-131.9	-131.9	-90.3	-90.3	21.5	80.3	-113.7	-66.5	-66.5
pH	SU	NL	NL	8.12	7.99	8.32	8.32	7.39	NA	8.38	7.76	7.76	8.04	8.04	7.32	7.32	8.01	7.63	7.68	7.43	7.43
Temperature	deg C	NL	NL	10.44	9.95	9	9	12.06	NA	10.13	9.68	9.68	7.31	7.31	10.57	10.57	10.05	8.58	7.84	11.71	11.71

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3817 Viebahn St									3825 Viebahn St							
Analyte	**Units**	**ES[1]**	**PAL[2]**	**10/29/14 Outside Spigot**	**11/7/14 Outside Spigot**	**2/24/15 Pressure Tank**	**10/20/15 Outside Spigot**	**3/31/16 Outside Spigot**	**10/6/16 Outside Spigot**	**5/30/17 Outside Spigot**	**10/25/17 Outside Spigot**	**5/21/18 Outside Spigot**	**10/29/14 Outside Spigot**	**11/7/14 Outside Spigot**	**2/23/15 Pressure Tank**	**02/23/15 (DUP) Pressure Tank**	**10/14/15 Pressure Tank**	**3/31/16 Pressure Tank**	**10/6/16 Pressure Tank**	**10/25/17 Pressure Tank**
Volatile Organic Compounds (VOCs):																				
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.41	< 0.41	< 0.54	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31	< 0.33	< 0.33	< 0.65	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3
cis-1,2-Dichloroethene	ug/l	70	7	0.4 J	< 0.38	< 0.45	0.49 J	< 0.45	0.47 J	0.5 J	0.55 J	0.7 J	< 0.38	< 0.38	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.41
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26	NA	NA	NA	NA	NA	NA	NA	< 0.21
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 1	< 0.34
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38	< 0.33	< 0.33	< 0.74	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32	NA	NA	NA	NA	NA	NA	NA	< 0.42
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA	< 0.69	< 0.69	< 0.9	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3817 Viebahn St									3825 Viebahn St							
Analyte	Units	ES[1]	PAL[2]	10/29/14 Outside Spigot	11/7/14 Outside Spigot	2/24/15 Pressure Tank	10/20/15 Outside Spigot	3/31/16 Outside Spigot	10/6/16 Outside Spigot	5/30/17 Outside Spigot	10/25/17 Outside Spigot	5/21/18 Outside Spigot	10/29/14 Outside Spigot	11/7/14 Outside Spigot	2/23/15 Pressure Tank	02/23/15 (DUP) Pressure Tank	10/14/15 Pressure Tank	3/31/16 Pressure Tank	10/6/16 Pressure Tank	10/25/17 Pressure Tank
Polycarbonated Biphenyls (PCBs):																				
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																				
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																				
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																				
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																				
Conductivity	uS/cm	NL	NL	631	658	746	649	NA	NA	NA	NA	NA	674	668	670	670	655	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	3.22	3.37	2.72	8.4	NA	NA	NA	NA	NA	2.94	6.05	4.32	4.32	1.16	NA	NA	NA
ORP	mV	NL	NL	-95.3	14	-158.6	-42.5	NA	NA	NA	NA	NA	-104.5	-21.3	-120.7	-120.7	-116.2	NA	NA	NA
pH	SU	NL	NL	7.83	8.31	8.13	8.27	NA	NA	NA	NA	NA	7.87	8.21	8.03	8.03	7.67	NA	NA	NA
Temperature	deg C	NL	NL	10.85	10.42	9.47	13.03	NA	NA	NA	NA	NA	10.27	9.86	7.43	7.43	12.83	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4025 Viebahn St				4101 Viebahn St (City Water Provided 2016)				4219 Viebahn St		5107 Viebahn St
				Original Potable Well (City Water Provided Dec 2016)				Original Potable Well						
Analyte	Units	ES[1]	PAL[2]	10/29/14 Pressure Tank	11/7/14 Pressure Tank	2/24/15 Pressure Tank	10/13/15 Pressure Tank	10/29/14 Pressure Tank	11/7/14 Pressure Tank	2/24/15 Pressure Tank	10/14/15 Pressure Tank	9/8/14 Outside Spigot	10/27/15 Outside Spigot	12/5/13 Well Pump
Volatile Organic Compounds (VOCs):														
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.48	< 0.33	< 0.33	< 0.48	< 0.48	< 0.33	< 0.48	< 0.33
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.84	< 0.33	< 0.33	< 0.84	< 0.84	< 0.33	< 0.84	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.52	< 0.45	< 0.45	< 0.52	< 0.52	< 0.45	< 0.52	< 0.45
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.48	< 0.34	< 0.34	< 0.48	< 0.48	< 0.34	< 0.48	< 0.34
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 1.1	< 0.3	< 0.3	< 1.1	< 1.1	< 0.3	< 1.1	< 0.3
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.65	< 0.4	< 0.4	< 0.65	< 0.65	< 0.4	< 0.65	< 0.4
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 2.7	< 1.8	< 1.8	< 2.7	< 2.7	< 1.8	< 2.7	< 1.8
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 1.7	< 0.98	< 0.98	< 1.7	< 1.7	< 0.98	< 1.7	< 0.98
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 1.6	< 2.2	< 2.2	< 1.6	< 1.6	< 2.2	< 1.6	< 2.2
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 1.4	< 0.88	< 0.88	< 1.4	< 1.4	< 0.88	< 1.4	< 0.88
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.63	< 0.44	< 0.44	< 0.63	< 0.63	< 0.44	< 0.63	< 0.44
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.46	< 0.36	< 0.36	< 0.46	< 0.46	< 0.36	< 0.46	< 0.36
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.54	< 0.48	< 0.41	< 0.41	< 0.54	< 0.48	< 0.41	< 0.48	< 0.41
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.43	< 0.32	< 0.32	< 0.43	< 0.43	< 0.32	< 0.43	< 0.32
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.5	< 1.4	< 1.4	< 1.5	< 1.5	< 1.4	< 1.5	< 1.4
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.52	< 0.28	< 0.28	< 0.52	< 0.52	< 0.28	< 0.52	< 0.28
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.42	< 0.33	< 0.33	< 0.42	< 0.42	< 0.33	< 0.42	< 0.33
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.49	< 0.3	< 0.3	< 0.49	< 0.49	< 0.3	< 0.49	< 0.3
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 3.1	< 0.36	< 0.36	< 3.1	< 3.1	< 0.36	< 3.1	< 0.36
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.4	< 0.21	< 0.21	< 0.4	< 0.4	< 0.21	< 0.4	< 0.21
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.63	< 0.21	< 0.21	< 0.63	< 0.63	< 0.21	< 0.63	< 0.21
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.44	< 0.24	< 0.24	< 0.44	< 0.44	< 0.24	< 0.44	< 0.24
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.48	< 0.32	< 0.32	< 0.48	< 0.48	< 0.32	< 0.48	< 0.32
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.46	< 0.37	< 0.37	< 0.46	< 0.46	< 0.37	< 0.46	< 0.37
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.46	< 0.35	< 0.35	< 0.46	< 0.46	< 0.35	< 0.46	< 0.35
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.65	< 0.51	< 0.33	< 0.33	< 0.65	< 0.51	< 0.33	< 0.51	< 0.33
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.46	< 0.24	< 0.24	< 0.46	< 0.46	< 0.24	< 0.46	< 0.24
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.65	< 0.63	< 0.63	< 0.65	< 0.65	< 0.63	< 0.65	< 0.63
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.43	< 0.28	< 0.28	< 0.43	< 0.43	< 0.28	< 0.43	< 0.28
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 1.9	< 0.81	< 0.81	< 1.9	< 1.9	< 0.81	< 1.9	< 0.81
cis-1,2-Dichloroethene	ug/l	70	7	1.38	1.46	1.11 J	1.85	1.48	1.13 J	1.24 J	1.59	< 0.38	< 0.45	< 0.38
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.22	< 0.45	< 0.45	< 0.22	< 0.45	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.87	< 0.44	< 0.44	< 0.87	< 0.87	< 0.44	< 0.87	< 0.44
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.71	< 0.55	< 0.55	< 0.71	< 0.71	< 0.55	< 0.71	< 0.55
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 2.2	< 1.5	< 1.5	< 2.2	< 2.2	< 1.5	< 2.2	< 1.5
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.44	< 0.23	< 0.23	< 0.44	< 0.44	< 0.23	< 0.44	< 0.23
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.82	< 0.3	< 0.3	< 0.82	< 0.82	< 0.3	< 0.82	< 0.3
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 2.2	< 0.69	< 0.69	< 2.2	< 2.2	< 0.69	< 2.2	< 0.69
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 0.5	< 0.5	< 1.3	< 1.3	< 0.5	< 1.3	< 0.5
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 1.1	< 0.23	< 0.23	< 1.1	< 1.1	< 0.23	< 1.1	< 0.23
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.6	< 1.7	< 1.7	< 1.6	< 1.6	< 1.7	< 1.6	< 1.7
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 1	< 0.35	< 0.35	< 1	< 1	< 0.35	< 1	< 0.35
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.77	< 0.25	< 0.25	< 0.77	< 0.77	< 0.25	< 0.77	< 0.25
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.9	< 0.63	< 0.63	< 0.9	< 0.9	< 0.63	< 0.9	< 0.63
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 1.1	< 0.31	< 0.31	< 1.1	< 1.1	< 0.31	< 1.1	< 0.31
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 1.2	< 0.33	< 0.33	< 1.2	< 1.2	< 0.33	< 1.2	< 0.33
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 1.1	< 0.36	< 0.36	< 1.1	< 1.1	< 0.36	< 1.1	< 0.36
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.74	< 0.49	< 0.33	< 0.33	< 0.74	< 0.49	< 0.33	< 0.49	< 0.33
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	0.95 J	< 0.69	< 0.44	< 0.44	< 0.69	< 0.69	< 0.44	< 0.44	< 0.69	< 0.44	< 0.69
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	< 1.6	< 2.2	NA	< 1.6	< 1.6	< 2.2	< 1.6	< 2.2
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.54	< 0.35	< 0.35	< 0.54	< 0.54	< 0.35	< 0.54	< 0.35
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.47	< 0.33	< 0.33	< 0.47	< 0.47	< 0.33	< 0.47	< 0.33
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.87	< 0.71	< 0.71	< 0.87	< 0.87	< 0.71	< 0.87	< 0.71
Vinyl chloride	ug/l	0.2	0.02	**0.34 J**	**0.31 J**	**0.32 J**	**0.44 J**	**0.38 J**	**0.39 J**	**0.43 J**	**0.54**	< 0.18	< 0.17	< 0.18
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.9	< 2.2	< 0.69	NA	< 0.9	< 2.2	< 0.69	< 2.2	< 0.69

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				4025 Viebahn St				4101 Viebahn St (City Water Provided 2016)				4219 Viebahn St		5107 Viebahn St
				Original Potable Well (City Water Provided Dec 2016)				Original Potable Well						
Analyte	Units	ES[1]	PAL[2]	10/29/14 Pressure Tank	11/7/14 Pressure Tank	2/24/15 Pressure Tank	10/13/15 Pressure Tank	10/29/14 Pressure Tank	11/7/14 Pressure Tank	2/24/15 Pressure Tank	10/14/15 Pressure Tank	9/8/14 Outside Spigot	10/27/15 Outside Spigot	12/5/13 Well Pump
Polycarbonated Biphenyls (PCBs):														
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:														
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:														
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:														
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:														
Conductivity	uS/cm	NL	NL	824	629	628	630	644	627	653	624	779	NA	571
Dissolved Oxygen	ppm	NL	NL	2.45	3.11	4.78	2.38	2.31	3.21	4.05	2.11	3.21	NA	4.23
ORP	mV	NL	NL	-104.9	-2.2	-126.9	-86.3	-91.1	-22.3	-151.7	-114.3	225	NA	84.5
pH	SU	NL	NL	7.87	8.03	7.92	7.35	7.79	7.99	8.04	7.51	7.45	NA	8.1
Temperature	deg C	NL	NL	10.89	10.23	8.86	11.43	11.17	10.87	8.99	12.21	11.75	NA	11.09

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3027 Orchard Ln											3128 Orchard Ln			3318 Orchard Ln	
Analyte	Units	ES[1]	PAL[2]	2/5/14 Pressure Tank	6/4/14 Pressure Tank	8/28/14 Pressure Tank	11/11/14 Pressure Tank	3/11/15 Pressure Tank	10/14/15 Pressure Tank	3/31/16 Pressure Tank	10/6/16 Pressure Tank	5/31/17 Pressure Tank	10/31/17 Pressure Tank	5/31/18	2/4/14 Pressure Tank	6/4/14 Pressure Tank	10/14/15 Pressure Tank	7/11/14 Outside Spigot	10/24/16 Outside Spigot
Volatile Organic Compounds (VOCs):																			
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35	< 0.33	< 0.33	< 0.48	< 0.33	< 0.48
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33	< 0.33	< 0.33	< 0.84	< 0.33	< 0.84
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3	< 0.45	< 0.45	< 0.52	< 0.45	< 0.52
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42	< 0.34	< 0.34	< 0.48	< 0.34	< 0.48
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36	< 0.3	< 0.3	< 1.1	< 0.3	< 1.1
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.4	< 0.4	< 0.65	< 0.4	< 0.65
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71	< 1.8	< 1.8	< 2.7	< 1.8	< 2.7
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15	< 0.98	< 0.98	< 1.7	< 0.98	< 1.7
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8	< 2.2	< 2.2	< 1.6	< 2.2	< 1.6
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96	< 0.88	< 0.88	< 1.4	< 0.88	< 1.4
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.44	< 0.44	< 0.63	< 0.44	< 0.63
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86	< 0.36	< 0.36	< 0.46	< 0.36	< 0.46
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.41	< 0.41	< 0.48	< 0.41	< 0.48
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44	< 0.32	< 0.32	< 0.43	< 0.32	< 0.43
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63	< 1.4	< 1.4	< 1.5	< 1.4	< 1.5
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85	< 0.28	< 0.28	< 0.52	< 0.28	< 0.52
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3	< 0.33	< 0.33	< 0.42	< 0.33	< 0.42
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7	< 0.3	< 0.3	< 0.49	< 0.3	< 0.49
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	< 0.36	< 0.36	< 3.1	< 0.36	< 3.1
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31	< 0.21	< 0.21	< 0.4	< 0.21	< 0.4
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26	< 0.21	< 0.21	< 0.63	< 0.21	< 0.63
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.24	< 0.24	< 0.44	< 0.24	< 0.44
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44	< 0.32	< 0.32	< 0.48	< 0.32	< 0.48
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33	< 0.37	< 0.37	< 0.46	< 0.37	< 0.46
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45	< 0.35	< 0.35	< 0.46	< 0.35	< 0.46
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31	< 0.33	< 0.33	< 0.51	< 0.33	< 0.51
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.24	< 0.24	< 0.46	< 0.24	< 0.46
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61	< 0.63	< 0.63	< 0.65	< 0.63	< 0.65
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.28	< 0.28	< 0.43	< 0.28	< 0.43
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 0.81	< 0.81	< 1.9	< 0.81	< 1.9
cis-1,2-Dichloroethene	ug/l	70	7	0.47 J	0.39 J	0.49 J	< 0.38	< 0.45	0.59 J	< 0.45	0.46 J	0.54 J	< 0.41	< 0.37	< 0.38	< 0.38	< 0.45	< 0.38	< 0.45
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26	NA	NA	NA	NA	NA
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.22	< 0.22	< 0.45	< 0.22	< 0.45
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32	< 0.44	< 0.44	< 0.87	< 0.44	< 0.87
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26	< 0.55	< 0.55	< 0.71	< 0.55	< 0.71
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34	< 1.5	< 1.5	< 2.2	< 1.5	< 2.2
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21	< 0.23	< 0.23	< 0.44	< 0.23	< 0.44
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78	< 0.3	< 0.3	< 0.82	< 0.3	< 0.82
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43	< 0.69	< 0.69	< 2.2	< 0.69	< 2.2
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 0.5	< 0.5	< 1.3	< 0.5	< 1.3
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28	< 0.23	< 0.23	< 1.1	< 0.23	< 1.1
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1	< 1.7	< 1.7	< 1.6	< 1.7	< 1.6
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71	< 0.35	< 0.35	< 1	< 0.35	< 1
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61	< 0.25	< 0.25	< 0.77	< 0.25	< 0.77
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29	< 0.63	< 0.63	< 0.9	< 0.63	< 0.9
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24	< 0.31	< 0.31	< 1.1	< 0.31	< 1.1
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79	< 0.33	< 0.33	< 1.2	< 0.33	< 1.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25	< 0.36	< 0.36	< 1.1	< 0.36	< 1.1
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38	< 0.33	< 0.33	< 0.49	< 0.33	< 0.49
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.69	< 0.69	< 0.44	< 0.69	< 0.44
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA	< 2.2	< 2.2	< 1.6	< 2.2	< 1.6
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.35	< 0.35	< 0.54	< 0.35	< 0.54
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32	NA	NA	NA	NA	NA
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3	< 0.33	< 0.33	< 0.47	< 0.33	< 0.47
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35	< 0.71	< 0.71	< 0.87	< 0.71	< 0.87
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA	< 0.69	< 0.69	< 2.2	< 0.69	< 2.2

AECOM

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3027 Orchard Ln											3128 Orchard Ln			3318 Orchard Ln	
Analyte	Units	ES[1]	PAL[2]	2/5/14 Pressure Tank	6/4/14 Pressure Tank	8/28/14 Pressure Tank	11/11/14 Pressure Tank	3/11/15 Pressure Tank	10/14/15 Pressure Tank	3/31/16 Pressure Tank	10/6/16 Pressure Tank	5/31/17 Pressure Tank	10/31/17 Pressure Tank	5/31/18	2/4/14 Pressure Tank	6/4/14 Pressure Tank	10/14/15 Pressure Tank	7/11/14 Outside Spigot	10/24/16 Outside Spigot
Polycarbonated Biphenyls (PCBs):																			
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																			
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																			
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																			
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																			
Conductivity	uS/cm	NL	NL	379	136	921	553	NA	548	NA	NA	NA	NA	NA	603	797	843	1033	NA
Dissolved Oxygen	ppm	NL	NL	7.42	2.5	1.22	4.06	NA	2.07	NA	NA	NA	NA	NA	NA	1.97	2.26	4.11	NA
ORP	mV	NL	NL	42.4	136	236	-7.3	NA	-100.6	NA	NA	NA	NA	NA	113.2	117	-106.5	123	NA
pH	SU	NL	NL	7.21	7.25	7.82	8.03	NA	7.88	NA	NA	NA	NA	NA	7.32	7.63	7.61	7.52	NA
Temperature	deg C	NL	NL	8.5	10.6	10.7	10.29	NA	12.69	NA	NA	NA	NA	NA	8.75	10.4	12.13	13.8	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3420 Orchard Ln			3523 Orchard Ln		3524 Orchard Ln				3911 Black Hawk Ct				
Analyte	Units	ES[1]	PAL[2]	2/4/14 Kitchen Sink	6/2/14 Kitchen Sink	10/6/16 Outside Spigot	2/4/14 Kitchen Sink	5/28/14 Kitchen Sink	2/4/14 Kitchen Sink	6/2/14 Kitchen Sink	06/02/14 (DUP) Kitchen Sink	10/13/15 Kitchen Sink	7/8/15 Spigot	10/6/16 Pressure Tank	5/31/17 Pressure Tank	10/30/17 Pressure Tank	5/21/18 Pressure Tank
Volatile Organic Compounds (VOCs):																	
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.48	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.84	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.52	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.48	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 1.1	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.65	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 2.7	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 1.7	< 0.98	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 1.6	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 1.4	< 0.88	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.63	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.46	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.48	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.43	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.5	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.52	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.42	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.33	< 0.42	< 0.49	< 0.49	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.49	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 3.1	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	NA	NA	NA
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.4	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.63	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.44	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.48	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.46	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.46	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.51	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.46	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.65	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.43	< 0.28	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 1.9	< 0.81	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54
cis-1,2-Dichloroethene	ug/l	70	7	< 0.38	< 0.38	< 0.45	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.45	< 0.45	0.59 J	< 0.41	< 0.41	0.58 J
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.45	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.87	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.71	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 2.2	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.44	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.82	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 2.2	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 1.1	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.6	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 1	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.77	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.9	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 1.1	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 1.2	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 1.1	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.49	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.44	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 1.6	NA	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.54	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.47	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.87	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.17	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 2.2	NA	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3420 Orchard Ln			3523 Orchard Ln		3524 Orchard Ln				3911 Black Hawk Ct				
Analyte	Units	ES[1]	PAL[2]	2/4/14 Kitchen Sink	6/2/14 Kitchen Sink	10/6/16 Outside Spigot	2/4/14 Kitchen Sink	5/28/14 Kitchen Sink	2/4/14 Kitchen Sink	6/2/14 Kitchen Sink	06/02/14 (DUP) Kitchen Sink	10/13/15 Kitchen Sink	7/8/15 Spigot	10/6/16 Pressure Tank	5/31/17 Pressure Tank	10/30/17 Pressure Tank	5/21/18 Pressure Tank
Polycarbonated Biphenyls (PCBs):																	
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																	
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																	
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																	
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																	
Conductivity	uS/cm	NL	NL	454	470	NA	NA	671	579	672	672	900	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	6.53	1.23	NA	NA	4.99	5.3	1.62	1.62	1.77	NA	NA	NA	NA	NA
ORP	mV	NL	NL	123.2	165	NA	NA	111	117.3	159	159	-75.7	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.1	8.06	NA	NA	7.78	7.03	7.41	7.41	7.34	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	7.1	11.8	NA	NA	10.6	9.29	12.1	12.1	12.28	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3921 Black Hawk Ct											2915 S 26TH St
Analyte	Units	ES[1]	PAL[2]	2/4/14 Pressure Tank	6/2/14 Pressure Tank	8/26/14 Pressure Tank	11/10/14 Pressure Tank	2/24/15 Pressure Tank	10/14/15 Pressure Tank	3/31/16 Pressure Tank	10/5/16 Pressure Tank	5/30/17 Pressure Tank	10/25/17 Pressure Tank	5/21/18 Pressure Tank	12/14/2017 [3] Sample Tap
Volatile Organic Compounds (VOCs):															
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.48	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.35	< 0.5
1,1,1-Trichloroethane	ug/l	200	40	< 0.33	< 0.33	< 0.33	< 0.33	< 0.84	< 0.84	< 0.84	< 0.84	< 0.35	< 0.35	< 0.33	< 0.5
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.45	< 0.45	< 0.45	< 0.45	< 0.52	< 0.52	< 0.52	< 0.52	< 0.69	< 0.69	< 0.3	< 0.5
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.34	< 0.34	< 0.34	< 0.34	< 0.48	< 0.48	< 0.48	< 0.48	< 0.65	< 0.65	< 0.42	< 0.5
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.3	< 0.3	< 0.3	< 1.1	< 1.1	< 1.1	< 1.1	< 0.42	< 0.42	< 0.36	< 0.3
1,1-Dichloroethene	ug/l	7	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.65	< 0.65	< 0.65	< 0.65	< 0.46	< 0.46	< 0.42	< 0.5
1,1-Dichloropropene	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 1.8	< 1.8	< 1.8	< 1.8	< 2.7	< 2.7	< 2.7	< 2.7	< 0.83	< 0.83	< 1.71	< 0.5
1,2,3-Trichloropropane	ug/l	60	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.98	< 0.98	< 0.98	< 0.98	< 1.7	< 1.7	< 1.7	< 1.7	< 1.29	< 1.29	< 1.15	< 0.5
1,2,4-Trimethylbenzene	ug/l	480	96	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	< 0.8	< 0.2
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 0.88	< 0.88	< 0.88	< 0.88	< 1.4	< 1.4	< 1.4	< 1.4	< 1.88	< 1.88	< 2.96	< 1
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.44	< 0.44	< 0.44	< 0.44	< 0.63	< 0.63	< 0.63	< 0.63	< 0.34	< 0.34	< 0.34	< 0.5
1,2-Dichlorobenzene	ug/l	600	60	< 0.36	< 0.36	< 0.36	< 0.36	< 0.46	< 0.46	< 0.46	< 0.46	< 0.34	< 0.34	< 0.86	< 0.25
1,2-Dichloroethane	ug/l	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	< 0.54	< 0.48	< 0.48	< 0.48	< 0.45	< 0.45	< 0.25	< 0.5
1,2-Dichloropropane	ug/l	5	0.5	< 0.32	< 0.32	< 0.32	< 0.32	< 0.43	< 0.43	< 0.43	< 0.43	< 0.39	< 0.39	< 0.44	< 0.5
1,3,5-Trimethylbenzene	ug/l	480	96	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5	< 1.5	< 1.5	< 0.91	< 0.91	< 0.63	< 0.2
1,3-Dichlorobenzene	ug/l	600	120	< 0.28	< 0.28	< 0.28	< 0.28	< 0.52	< 0.52	< 0.52	< 0.52	< 0.45	< 0.45	< 0.85	< 0.25
1,3-Dichloropropane	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 0.42	< 0.42	< 0.42	< 0.42	< 0.49	< 0.49	< 0.3	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	< 0.42	< 0.42	< 0.7	< 0.25
2,2-Dichloropropane	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 3.1	< 3.1	< 3.1	< 3.1	NA	NA	NA	< 0.5
2-Butanone (MEK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3
2-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.4	< 0.4	< 0.4	< 0.4	< 0.36	< 0.36	< 0.31	< 0.3
4-Chlorotoluene	ug/l	NL	NL	< 0.21	< 0.21	< 0.21	< 0.21	< 0.63	< 0.63	< 0.63	< 0.63	< 0.35	< 0.35	< 0.26	< 0.3
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2
Acetone	ug/l	9000	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 3
Benzene	ug/l	5	0.5	< 0.24	< 0.24	< 0.24	< 0.24	< 0.44	< 0.44	< 0.44	< 0.44	< 0.17	< 0.17	< 0.22	< 0.3
Bromobenzene	ug/l	NL	NL	< 0.32	< 0.32	< 0.32	< 0.32	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	< 0.43	< 0.44	< 0.5
Bromochloromethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5
Bromodichloromethane	ug/l	0.6	0.06	< 0.37	< 0.37	< 0.37	< 0.37	< 0.46	< 0.46	< 0.46	< 0.46	< 0.31	< 0.31	< 0.33	< 0.5
Bromoform	ug/l	4.4	0.44	< 0.35	< 0.35	< 0.35	< 0.35	< 0.46	< 0.46	< 0.46	< 0.46	< 0.49	< 0.49	< 0.45	< 1
Bromomethane	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5
Carbon disulfide	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.3
Carbon tetrachloride	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.65	< 0.51	< 0.51	< 0.51	< 0.21	< 0.21	< 0.31	< 0.5
Chlorobenzene	ug/l	100	20	< 0.24	< 0.24	< 0.24	< 0.24	< 0.46	< 0.46	< 0.46	< 0.46	< 0.27	< 0.27	< 0.26	< 0.25
Chloroethane	ug/l	400	80	< 0.63	< 0.63	< 0.63	< 0.63	< 0.65	< 0.65	< 0.65	< 0.65	< 0.5	< 0.5	< 0.61	< 0.5
Chloroform	ug/l	6	0.6	< 0.28	< 0.28	< 0.28	< 0.28	< 0.43	< 0.43	< 0.43	< 0.43	< 0.96	< 0.96	< 0.26	< 0.25
Chloromethane	ug/l	30	3	< 0.81	< 0.81	< 0.81	< 0.81	< 1.9	< 1.9	< 1.9	< 1.9	< 1.3	< 1.3	< 0.54	< 1
cis-1,2-Dichloroethene	ug/l	70	7	0.87 J	0.97 J	1.14 J	0.65 J	0.93 J	1.04 J	0.71 J	0.63 J	0.57 J	0.51 J	0.95 J	< 0.3
cis-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.21	< 0.21	< 0.26	< 0.3
Dibromochloromethane	ug/l	60	6	< 0.22	< 0.22	< 0.22	< 0.22	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.22	< 0.5
Dibromomethane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5
Dichlorodifluoromethane	ug/l	1000	200	< 0.44	< 0.44	< 0.44	< 0.44	< 0.87	< 0.87	< 0.87	< 0.87	< 0.38	< 0.38	< 0.32	< 0.5
Ethylbenzene	ug/l	700	140	< 0.55	< 0.55	< 0.55	< 0.55	< 0.71	< 0.71	< 0.71	< 0.71	< 0.2	< 0.2	< 0.26	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 1.5	< 1.5	< 1.5	< 1.5	< 2.2	< 2.2	< 2.2	< 2.2	< 1.47	< 1.47	< 1.34	< 0.5
Hexane	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5
Isopropyl ether	ug/l	NL	NL	< 0.23	< 0.23	< 0.23	< 0.23	< 0.44	< 0.44	< 0.44	< 0.44	< 0.26	< 0.26	< 0.21	< 0.25
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.3	< 0.3	< 0.3	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.29	< 0.29	< 0.78	< 0.2
m,p-Xylenes	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 2.2	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	< 0.43	< 0.4
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.3	< 1.3	< 1.3	< 1.3	< 0.94	< 0.94	< 1.32	< 0.5
Methyl-tert-butyl ether	ug/l	60	12	< 0.23	< 0.23	< 0.23	< 0.23	< 1.1	< 1.1	< 1.1	< 1.1	< 0.82	< 0.82	< 0.28	< 0.3
Naphthalene	ug/l	100	10	< 1.7	< 1.7	< 1.7	< 1.7	< 1.6	< 1.6	< 1.6	< 1.6	< 2.17	< 2.17	< 2.1	< 0.3
n-Butylbenzene	ug/l	NL	NL	< 0.35	< 0.35	< 0.35	< 0.35	< 1	< 1	< 1	< 1	< 0.34	< 0.34	< 0.71	< 0.2
n-Propylbenzene	ug/l	NL	NL	< 0.25	< 0.25	< 0.25	< 0.25	< 0.77	< 0.77	< 0.77	< 0.77	< 0.19	< 0.19	< 0.61	< 0.2
o-Xylene	ug/l	2000	400	< 0.63	< 0.63	< 0.63	< 0.63	< 0.9	< 0.9	< 0.9	< 0.9	< 0.39	< 0.39	< 0.29	< 0.3
p-Isopropyltoluene	ug/l	NL	NL	< 0.31	< 0.31	< 0.31	< 0.31	< 1.1	< 1.1	< 1.1	< 1.1	< 0.28	< 0.28	< 0.24	< 0.2
sec-Butylbenzene	ug/l	NL	NL	< 0.33	< 0.33	< 0.33	< 0.33	< 1.2	< 1.2	< 1.2	< 1.2	< 0.24	< 0.24	< 0.79	< 0.2
Styrene	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.25
tert-Butylbenzene	ug/l	NL	NL	< 0.36	< 0.36	< 0.36	< 0.36	< 1.1	< 1.1	< 1.1	< 1.1	< 0.39	< 0.39	< 0.25	< 0.5
Tetrachloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.74	< 0.49	< 0.49	< 0.49	< 0.48	< 0.48	< 0.38	< 0.5
Tetrahydrofuran	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2
Toluene	ug/l	800	160	< 0.69	< 0.69	< 0.69	< 0.69	< 0.44	< 0.44	< 0.44	< 0.44	< 0.67	< 0.67	< 0.19	< 0.25
Total Trimethylbenzene	ug/l	NL	NL	< 2.2	< 2.2	< 2.2	< 2.2	< 1.6	< 1.6	< 1.6	< 1.6	< 1.14	< 1.14	NA	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.35	< 0.35	< 0.35	< 0.35	< 0.54	< 0.54	< 0.54	< 0.54	< 0.35	< 0.35	< 0.34	< 0.5
trans-1,3-Dichloropropene	ug/l	0.4	0.04	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42	< 0.42	< 0.32	< 0.5
Trichloroethene	ug/l	5	0.5	< 0.33	< 0.33	< 0.33	< 0.33	< 0.47	< 0.47	< 0.47	< 0.47	< 0.45	< 0.45	< 0.3	< 0.5
Trichlorofluoromethane	ug/l	3490	698	< 0.71	< 0.71	< 0.71	< 0.71	< 0.87	< 0.87	< 0.87	< 0.87	< 0.64	< 0.64	< 0.35	< 0.5
Vinyl chloride	ug/l	0.2	0.02	< 0.18	< 0.18	< 0.18	< 0.18	< 0.17	< 0.17	< 0.17	< 0.17	< 0.19	< 0.19	< 0.2	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.69	< 0.69	< 0.69	< 0.69	< 0.9	< 2.2	< 2.2	< 2.2	< 1.56	< 1.56	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				3921 Black Hawk Ct											2915 S 26TH St
Analyte	**Units**	**ES[1]**	**PAL[2]**	**2/4/14 Pressure Tank**	**6/2/14 Pressure Tank**	**8/26/14 Pressure Tank**	**11/10/14 Pressure Tank**	**2/24/15 Pressure Tank**	**10/14/15 Pressure Tank**	**3/31/16 Pressure Tank**	**10/5/16 Pressure Tank**	**5/30/17 Pressure Tank**	**10/25/17 Pressure Tank**	**5/21/18 Pressure Tank**	**12/14/2017 [3] Sample Tap**
Polycarbonated Biphenyls (PCBs):															
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:															
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:															
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:															
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:															
Conductivity	uS/cm	NL	NL	468	636	762	754	810	742	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	NA	2.83	1.34	5.53	7.64	2.48	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	100.3	148	206	-27.2	-160.9	-124.6	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	7.21	7.61	7.45	7.95	7.99	7.5	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	10.06	12.7	14.3	11.85	8.8	13.77	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2918 S 26TH St							3008 S 26TH St		3203 S 26TH St	3107 Fricke Dr	3609 M&M Ln		2201 Elm Road	2201 Elm Road	2408 Elm Road	2417 Elm Road	2514 Elm Road	2501 Nelson Lane
				Original Potable Well			Replacement Potable Well															
Analyte	Units	ES[1]	PAL[2]	8/15/2017 [4] Exterior Spigot	9/5/17 Pressure Tank	09/05/17 (DUP) Pressure Tank	12/11/17 Pressure Tank	12/11/17 (DUP) Pressure Tank	03/05/18 Pressure Tank	03/05/18 Pressure Tank	11/8/2017 [3] Spigot W Side	12/14/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/5/13 Well Pump	12/4/2013 [3] Pressure Tank	12/16/13 Pressure Tank	12/19/2017 [3] Basement Tap	2/14/2018 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap
Volatile Organic Compounds (VOCs):																						
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.5	< 0.47	< 0.47	< 0.47	< 0.47	NA	< 0.35	< 0.5	< 0.5	< 0.5	< 0.33	< 0.15	< 0.15	< 0.5	< 0.37	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	ug/l	200	40	< 0.5	< 0.35	< 0.35	< 0.35	< 0.35	NA	< 0.33	< 0.5	< 0.5	< 0.5	< 0.33	< 0.15	< 0.15	< 0.5	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.5	< 0.69	< 0.69	< 0.69	< 0.69	NA	< 0.3	< 0.5	< 0.5	< 0.5	< 0.45	< 0.2	< 0.2	< 0.5	< 0.36	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.5	< 0.65	< 0.65	< 0.65	< 0.65	NA	< 0.42	< 0.5	< 0.5	< 0.5	< 0.34	< 0.15	< 0.15	< 0.5	< 0.48	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichlorotrifluoroethane	ug/l	NL	NL	< 0.5	NA	NA	NA	NA	NA	NA	< 0.5	< 0.5	< 0.5	NA	NA	NA	< 0.5	< 0.72	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	ug/l	850	85	< 0.3	< 0.42	< 0.42	< 0.42	< 0.42	NA	< 0.36	< 0.3	< 0.3	< 0.3	< 0.3	< 0.15	< 0.15	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,1-Dichloroethene	ug/l	7	0.7	< 0.5	< 0.46	< 0.46	< 0.46	< 0.46	NA	< 0.42	< 0.5	< 0.5	< 0.5	< 0.4	< 0.15	< 0.15	< 0.5	< 0.22	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloropropene	ug/l	NL	NL	< 0.5	NA	NA	NA	NA	NA	NA	< 0.5	< 0.5	< 0.5	NA	< 0.15	< 0.15	< 0.5	< 0.19	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	ug/l	NL	NL	< 0.5	< 0.83	< 0.83	< 0.83	< 0.83	NA	< 1.71	< 0.5	< 0.5	< 0.5	< 1.8	< 0.15	< 0.15	< 0.5	< 0.33	< 0.5	< 0.5	< 0.5	< 0.5
1,2,3-Trichloropropane	ug/l	60	12	< 1	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	NA	< 0.15	< 0.15	< 1	< 0.36	< 1	< 1	< 1	< 1
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.5	< 1.29	< 1.29	< 1.29	< 1.29	NA	< 1.15	< 0.5	< 0.5	< 0.5	< 0.98	< 0.15	< 0.15	< 0.5	< 0.47	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trimethylbenzene	ug/l	480	96	< 0.2	< 1.14	< 1.14	< 1.14	< 1.14	NA	< 0.8	< 0.2	< 0.2	< 0.2	< 2.2	< 0.15	< 0.15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dibromo-3-chloropropane	ug/l	0.2	0.02	< 1	< 1.88	< 1.88	< 1.88	< 1.88	NA	< 2.96	< 1	< 1	< 1	< 0.88	< 0.2	< 0.2	< 1	< 0.4	< 1	< 1	< 1	< 1
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.5	< 0.34	< 0.34	< 0.34	< 0.34	NA	< 0.34	< 0.5	< 0.5	< 0.5	< 0.44	< 0.15	< 0.15	< 0.5	< 0.39	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	ug/l	600	60	< 0.25	< 0.34	< 0.34	< 0.34	< 0.34	NA	< 0.86	< 0.25	< 0.25	< 0.25	< 0.36	< 0.15	< 0.15	< 0.25	< 0.12	< 0.25	< 0.25	< 0.25	< 0.25
1,2-Dichloroethane	ug/l	5	0.5	< 0.5	< 0.45	< 0.45	< 0.45	< 0.45	NA	< 0.25	< 0.5	< 0.5	< 0.5	< 0.41	< 0.15	< 0.15	< 0.5	< 0.16	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	ug/l	5	0.5	< 0.5	< 0.39	< 0.39	< 0.39	< 0.39	NA	< 0.44	< 0.5	< 0.5	< 0.5	< 0.32	< 0.15	< 0.15	< 0.5	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5
1,3,5-Trimethylbenzene	ug/l	480	96	< 0.2	< 0.91	< 0.91	< 0.91	< 0.91	NA	< 0.63	< 0.2	< 0.2	< 0.2	< 1.4	< 0.15	< 0.15	< 0.2	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	ug/l	600	120	< 0.25	< 0.45	< 0.45	< 0.45	< 0.45	NA	< 0.85	< 0.25	< 0.25	< 0.25	< 0.28	< 0.15	< 0.15	< 0.25	< 0.11	< 0.25	< 0.25	< 0.25	< 0.25
1,3-Dichloropropane	ug/l	NL	NL	< 0.3	< 0.49	< 0.49	< 0.49	< 0.49	NA	< 0.3	< 0.3	< 0.3	< 0.3	< 0.33	< 0.15	< 0.15	< 0.3	< 0.29	< 0.3	< 0.3	< 0.3	< 0.3
1,4-Dichlorobenzene	ug/l	75	15	< 0.25	< 0.42	< 0.42	< 0.42	< 0.42	NA	< 0.7	< 0.25	< 0.25	< 0.25	< 0.3	< 0.15	< 0.15	< 0.25	< 0.11	< 0.25	< 0.25	< 0.25	< 0.25
2,2-Dichloropropane	ug/l	NL	NL	< 0.5	NA	NA	NA	NA	NA	NA	< 0.5	< 0.5	< 0.5	< 0.36	< 0.15	< 0.15	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	ug/l	NL	NL	< 3	NA	NA	NA	NA	NA	NA	< 3	< 3	< 3	NA	NA	NA	< 3	< 2	< 3	< 3	< 3	< 3
2-Chlorotoluene	ug/l	NL	NL	< 0.3	< 0.36	< 0.36	< 0.36	< 0.36	NA	< 0.31	< 0.3	< 0.3	< 0.3	< 0.21	< 0.15	< 0.15	< 0.3	< 0.29	< 0.3	< 0.3	< 0.3	< 0.3
4-Chlorotoluene	ug/l	NL	NL	< 0.3	< 0.35	< 0.35	< 0.35	< 0.35	NA	< 0.26	< 0.3	< 0.3	< 0.3	< 0.21	< 0.15	< 0.15	< 0.3	< 0.32	< 0.3	< 0.3	< 0.3	< 0.3
4-Methyl-2-pentanone (MIBK)	ug/l	NL	NL	< 2	NA	NA	NA	NA	NA	NA	< 2	< 2	< 2	NA	NA	NA	< 2	< 1.3	< 2	< 2	< 2	< 2
Acetone	ug/l	9000	1800	< 3	NA	NA	NA	NA	NA	NA	< 3	< 3	< 3	NA	NA	NA	< 3	< 2	< 3	< 3	< 3	< 3
Benzene	ug/l	5	0.5	< 0.3	< 0.17	< 0.17	< 0.17	< 0.17	NA	< 0.22	< 0.3	< 0.3	< 0.3	< 0.24	< 0.15	< 0.15	< 0.3	< 0.1	< 0.3	< 0.3	< 0.3	< 0.3
Bromobenzene	ug/l	NL	NL	< 0.5	< 0.43	< 0.43	< 0.43	< 0.43	NA	< 0.44	< 0.5	< 0.5	< 0.5	< 0.32	< 0.15	< 0.15	< 0.5	< 0.29	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	ug/l	NL	NL	< 0.5	NA	NA	NA	NA	NA	NA	< 0.5	< 0.5	< 0.5	NA	< 0.15	< 0.15	< 0.5	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	ug/l	0.6	0.06	< 0.5	< 0.31	< 0.31	< 0.31	< 0.31	NA	< 0.33	< 0.5	< 0.5	< 0.5	< 0.37	< 0.15	< 0.15	< 0.5	< 0.17	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	ug/l	4.4	0.44	< 1	< 0.49	< 0.49	< 0.49	< 0.49	NA	< 0.45	< 1	< 1	< 1	< 0.35	< 0.15	< 0.15	< 1	< 1	< 1	< 1	< 1	< 1
Bromomethane	ug/l	10	1	< 0.5	NA	NA	NA	NA	NA	NA	< 0.5	< 0.5	< 0.5	NA	NA	NA	< 0.5	< 0.31	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	ug/l	1000	200	< 0.3	NA	NA	NA	NA	NA	NA	< 0.3	< 0.3	< 0.3	NA	NA	NA	< 0.3	< 1	< 0.3	< 0.3	< 0.69	< 0.3
Carbon tetrachloride	ug/l	5	0.5	< 0.5	< 0.21	< 0.21	< 0.21	< 0.21	NA	< 0.31	< 0.5	< 0.5	< 0.5	< 0.33	< 0.15	< 0.15	< 0.5	< 0.21	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	ug/l	100	20	< 0.25	< 0.27	< 0.27	< 0.27	< 0.27	NA	< 0.26	< 0.25	< 0.25	< 0.25	< 0.24	< 0.15	< 0.15	< 0.25	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25
Chloroethane	ug/l	400	80	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	< 0.61	< 0.5	< 0.5	< 0.5	< 0.63	< 0.15	< 0.15	< 0.5	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	ug/l	6	0.6	< 0.25	< 0.96	< 0.96	< 0.96	< 0.96	NA	< 0.26	< 0.25	< 0.25	< 0.25	< 0.28	< 0.15	< 0.15	< 0.25	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25
Chloromethane	ug/l	30	3	< 1	< 1.3	< 1.3	< 1.3	< 1.3	NA	< 0.54	< 1	< 1	< 1	< 0.81	< 0.15	< 0.15	< 1	< 0.89	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	ug/l	70	7	1.1	0.85 J	0.75 J	< 0.41	< 0.41	NA	< 0.37	1	0.85	< 0.3	< 0.38	< 0.15	< 0.15	0.51	0.55	< 0.3	< 0.3	< 0.3	< 0.3
cis-1,3-Dichloropropene	ug/l	0.4	0.04	< 0.3	< 0.21	< 0.21	< 0.21	< 0.21	NA	< 0.26	< 0.3	< 0.3	< 0.3	NA	< 0.15	< 0.15	< 0.3	< 0.14	< 0.3	< 0.3	< 0.3	< 0.3
Dibromochloromethane	ug/l	60	6	< 0.5	< 0.45	< 0.45	< 0.45	< 0.45	NA	< 0.22	< 0.5	< 0.5	< 0.5	< 0.22	< 0.15	< 0.15	< 0.5	< 0.26	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	ug/l	NL	NL	< 0.5	NA	NA	NA	NA	NA	NA	< 0.5	< 0.5	< 0.5	NA	< 0.15	< 0.15	< 0.5	< 0.23	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	ug/l	1000	200	< 0.5	< 0.38	< 0.38	< 0.38	< 0.38	NA	< 0.32	< 0.5	< 0.5	< 0.5	< 0.44	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	ug/l	700	140	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	< 0.26	< 0.2	< 0.2	< 0.2	< 0.55	< 0.15	< 0.15	< 0.2	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2
Hexachloro-1,3-butadiene	ug/l	NL	NL	< 0.5	< 1.47	< 1.47	< 1.47	< 1.47	NA	< 1.34	< 0.5	< 0.5	< 0.5	< 1.5	< 0.15	< 0.15	< 0.5	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5
Hexane	ug/l	NL	NL	< 0.5	NA	NA	NA	NA	NA	NA	< 0.5	< 0.5	< 0.5	NA	NA	NA	< 0.5	< 0.73	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl ether	ug/l	NL	NL	< 0.25	< 0.26	< 0.26	< 0.26	< 0.26	NA	< 0.21	< 0.25	< 0.25	< 0.25	< 0.23	NA	NA	< 0.25	< 0.21	< 0.25	< 0.25	< 0.25	< 0.25
Isopropylbenzene (Cumene)	ug/l	NL	NL	< 0.2	< 0.29	< 0.29	< 0.29	< 0.29	NA	< 0.78	< 0.2	< 0.2	< 0.2	< 0.3	< 0.15	< 0.15	< 0.2	< 0.31	< 0.2	< 0.2	< 0.2	< 0.2
m,p-Xylenes	ug/l	2000	400	< 0.4	< 1.56	< 1.56	< 1.56	< 1.56	NA	< 0.43	< 0.4	< 0.4	< 0.4	< 0.69	< 0.15	< 0.15	< 0.4	< 0.56	< 0.4	< 0.4	< 0.4	< 0.4
Methylene Chloride	ug/l	5	0.5	< 0.5	< 0.94	< 0.94	< 0.94	< 0.94	NA	< 1.32	< 0.5	< 0.5	< 0.5	< 0.5	< 0.15	< 0.15	< 0.5	< 0.15	< 0.5	< 0.5	< 0.5	< 0.5
Methyl-tert-butyl ether	ug/l	60	12	< 0.3	< 0.82	< 0.82	< 0.82	< 0.82	NA	< 0.28	< 0.3	< 0.3	< 0.3	< 0.23	< 0.15	< 0.15	< 0.3	< 0.24	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	ug/l	100	10	< 0.3	< 2.17	< 2.17	< 2.17	< 2.17	NA	< 2.1	< 0.3	< 0.3	< 0.3	< 1.7	< 0.15	< 0.15	< 0.3	< 0.32	< 0.3	< 0.3	< 0.3	< 0.3
n-Butylbenzene	ug/l	NL	NL	< 0.2	< 0.34	< 0.34	< 0.34	< 0.34	NA	< 0.71	< 0.2	< 0.2	< 0.2	< 0.35	< 0.15	< 0.15	< 0.2	< 0.58	< 0.2	< 0.2	< 0.2	< 0.2
n-Propylbenzene	ug/l	NL	NL	< 0.2	< 0.19	< 0.19	< 0.19	< 0.19	NA	< 0.61	< 0.2	< 0.2	< 0.2	< 0.25	< 0.15	< 0.15	< 0.2	< 0.26	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	ug/l	2000	400	< 0.3	< 0.39	< 0.39	< 0.39	< 0.39	NA	< 0.29	< 0.3	< 0.3	< 0.3	< 0.63	< 0.15	< 0.15	< 0.3	< 0.33	< 0.3	< 0.3	< 0.3	< 0.3
p-Isopropyltoluene	ug/l	NL	NL	< 0.2	< 0.28	< 0.28	< 0.28	< 0.28	NA	< 0.24	< 0.2	< 0.2	< 0.2	< 0.31	< 0.15	< 0.15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
sec-Butylbenzene	ug/l	NL	NL	< 0.2	< 0.24	< 0.24	< 0.24	< 0.24	NA	< 0.79	< 0.2	< 0.2	< 0.2	< 0.33	< 0.15	< 0.15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Styrene	ug/l	100	10	< 0.25	NA	NA	NA	NA	NA	NA	< 0.25	< 0.25	< 0.25	NA	< 0.15	< 0.15	< 0.25	< 0.27	< 0.25	< 0.25	< 0.25	< 0.25
tert-Butylbenzene	ug/l	NL	NL	< 0.5	< 0.39	< 0.39	< 0.39	< 0.39	NA	< 0.25	< 0.5	< 0.5	< 0.5	< 0.36	< 0.15	< 0.15	< 0.5	< 0.42	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	ug/l	5	0.5	< 0.5	< 0.48	< 0.48	< 0.48	< 0.48	NA	< 0.38	< 0.5	< 0.5	< 0.5	< 0.33	< 0.15	< 0.15	< 0.5	< 0.29	< 0.5	< 0.5	< 0.5	< 0.5
Tetrahydrofuran	ug/l	NL	NL	< 2	NA	NA	NA	NA	NA	NA	< 2	< 2	< 2	NA	NA	NA	< 2	< 1.4	< 2	< 2	< 2	< 2
Toluene	ug/l	800	160	< 0.25	< 0.67	< 0.67	< 0.67	< 0.67	NA	< 0.19	< 0.25	< 0.25	< 0.25	< 0.69	< 0.15	< 0.15	< 0.25	< 0.29	< 0.25	< 0.25	< 0.25	< 0.25
Total Trimethylbenzene	ug/l	NL	NL	< 0.4	NA	< 1.14	< 1.14	NA	NA	NA	NA	NA	NA	< 2.2	< 0.15	< 0.15	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	ug/l	100	20	< 0.5	< 0.35	< 0.35	< 0.35	< 0.35	NA	< 0.34	< 0.5	< 0.5	< 0.5	< 0.35	< 0.15	< 0.15	< 0.5	< 0.22	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	ug/l	0.4	0.04	< 0.5	< 0.42	< 0.42	< 0.42	< 0.42	NA	< 0.32	< 0.5	< 0.5	< 0.5	NA	< 0.15	< 0.15	< 0.5	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	ug/l	5	0.5	< 0.5	< 0.45	< 0.45	< 0.45	< 0.45	NA	< 0.3	< 0.5	< 0.5	< 0.5	< 0.33	< 0.15	< 0.15	< 0.5	< 0.16	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	ug/l	3490	698	< 0.5	< 0.64	< 0.64	< 0.64	< 0.64	NA	< 0.35	< 0.5	< 0.5	< 0.5	< 0.71	< 0.15	< 0.15	< 0.5	< 0.24	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	ug/l	0.2	0.02	**0.21 J**	**0.26 J**	**0.24 J**	< 0.19	< 0.19	NA	< 0.2	**0.47**	**0.55**	< 0.2	< 0.18	< 0.2	< 0.2	< 0.2	**0.2**	< 0.2	< 0.2	< 0.2	< 0.2
Xylene (Total)	ug/l	2000	400	< 0.4	NA	< 1.56	< 1.56	NA	NA	NA	NA	NA	NA	< 0.69	< 0.15	< 0.15	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

				2918 S 26TH St							3008 S 26TH St		3203 S 26TH St	3107 Fricke Dr	3609 M&M Ln		2201 Elm Road	2201 Elm Road	2408 Elm Road	2417 Elm Road	2514 Elm Road	2501 Nelson Lane
				Original Potable Well			Replacement Potable Well															
Analyte	Units	ES[1]	PAL[2]	8/15/2017 [4] Exterior Spigot	9/5/17 Pressure Tank	09/05/17 (DUP) Pressure Tank	12/11/17 Pressure Tank	12/11/17 (DUP) Pressure Tank	03/05/18 Pressure Tank	03/05/18 Pressure Tank	11/8/2017 [3] Spigot W Side	12/14/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/5/13 Well Pump	12/4/2013 [3] Pressure Tank	12/16/13 Pressure Tank	12/19/2017 [3] Basement Tap	2/14/2018 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap	12/19/2017 [3] Basement Tap
Polycarbonated Biphenyls (PCBs):																						
Aroclor 1016	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	\\\\\\\\	NA	NA	NA	NA
Aroclor 1254	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/l	0.03	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																						
Aluminum	ug/l	NL	NL	NA	NA	NA	NA	NA	< 8.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	7.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	ug/l	4	0.4	NA	NA	NA	NA	NA	< 0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	ug/l	1000	200	NA	NA	NA	NA	NA	**280**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	< 0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NL	NL	NA	NA	NA	NA	NA	544	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	< 3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	ug/l	40	8	NA	NA	NA	NA	NA	< 2.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/l	1300	130	NA	NA	NA	NA	NA	4.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	mg/L	NL	NL	NA	NA	NA	NA	NA	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness, Total Unfiltered	mg/L	NL	NL	NA	NA	NA	1898	NA	1853	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	**14.5**	NA	**2.17**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lithium	ug/l	NL	NL	NA	NA	NA	NA	NA	< 5.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NL	NL	NA	NA	NA	NA	NA	119	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/l	300	60	NA	NA	NA	NA	NA	19.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/l	40	8	NA	NA	NA	NA	NA	**12.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	ug/l	100	20	NA	NA	NA	NA	NA	< 3.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	ug/l	NL	NL	NA	NA	NA	NA	NA	< 7.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NL	NL	NA	NA	NA	NA	NA	4.94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silicon	ug/l	NL	NL	NA	NA	NA	NA	NA	3110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	< 8.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NL	NL	NA	NA	NA	NA	NA	123	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	ug/l	NL	NL	NA	NA	NA	NA	NA	30600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	ug/l	30	6	NA	NA	NA	NA	NA	**9.09**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/l	5000	2500	NA	NA	NA	NA	NA	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals:																						
Arsenic	ug/l	10	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	ug/l	2000	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/l	5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/l	100	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	ug/l	15	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/l	2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/l	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids:																						
Total Dissolved Solids	mg/L	NL	NL	NA	NA	NA	3007	NA	2980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field Screening Measurements:																						
Conductivity	uS/cm	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	561	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen	ppm	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.32	NA	NA	NA	NA	NA	NA	NA	NA
ORP	mV	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	80.3	NA	NA	NA	NA	NA	NA	NA	NA
pH	SU	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.63	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	deg C	NL	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.58	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2

SUMMARY OF CONTAMINATES ANALYZED IN POTABLE WELLS
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

NOTES:

(1) Enforcement Standard from NR140, February 2017.
(2) Preventive Action Limit from NR140, February 2017.
(3) Sample Collected by the WDNR.
(4) Sample Collected by the Property Owner.
DUP - Field duplicate sample
NL - ES or PAL not listed in NR140.
NA - Not analyzed.
J - Compound was detected at a concentration between the limit of detection (LOD) and the limit of quantitation (LOQ).

Bold indicates a PAL exceedance.
Bold and underlining indicates an ES exceedance.

Table 3
POTABLE WELL MONITORING WORK PLAN

SUMMARY OF FIVE YEAR POTABLE WELL SAMPLING PLAN (UPDATED JUNE 2017)
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Well Address	Map Color Code	Date of Previous Sampling Event	2017		2018		2019		2020		2021	
			May	October	May	October	May	October	May	October	May	October
Target Zone Wells (semi-annual sampling)												
3817 Viebahn St		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
3327 Hecker Rd		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
3461(3417) Hecker Rd		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
3702 Hecker Rd		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
3618 CTH CR		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
4027 Thunder Ridge Rd		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
4101 Thunder Ridge Rd		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
4111 Thunder Ridge Rd		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
3911 Blackhawk Ct		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
3921 Black Hawk Ct		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
4159 Silver Creek Rd		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
3027 Orchard Ln		May 2017	~~1~~	~~1~~	~~1~~	1	1	1	1	1	1	1
Target Zone Sentinel Wells (sample annualy)												
3320 Hecker Rd		Oct 2016		~~1~~		1		1		1		1
3825 Viebahn St		Oct 2016		~~1~~		1		1		1		1
2832 (2904) CTH CR		Oct 2016		~~1~~		1		1		1		1
2911 CTH CR		Oct 2016		~~1~~		1		1		1		1
3224 CTH CR		Oct 2016		~~1~~		1		1		1		1
3312 CTH CR		Oct 2016		~~1~~		1		1		1		1
3322 CTH CR		Oct 2016		~~1~~		1		1		1		1
3412 CTH CR		Oct 2016		~~1~~		1		1		1		1
3422 CTH CR		Oct 2016		~~1~~		1		1		1		1
3523 CTH CR		Oct 2016		~~1~~		1		1		1		1
3533 CTH CR		Oct 2016		~~1~~		1		1		1		1
3611 CTH CR		Oct 2016		~~1~~		1		1		1		1
3626(3626B) CTH CR		Oct 2016		~~1~~		1		1		1		1
3627 CTH CR		Oct 2016		~~1~~		1		1		1		1
Sentinel Zone 3-Year Wells (sample every 3rd year)												
3625 Hecker Rd		Oct 2016						1				Oct 2022
2717 CTH CR (4141 Viebahn St) non-potable well		Oct 2016						1				Oct 2022
2716 CTH CR		Oct 2015				1						1
3904 CTH CR		May 2017	~~1~~						1			
4024 CTH CR		Oct 2016						1				Oct 2022
4101 CTH CR		Oct 2015				1						1
4127 Thunder Ridge Rd		March 2016					1					May 2022
3128 Orchard Ln		Oct 2015				1						1
4212 Silver Creek Rd 4220 Silver Creek Rd (3 Properties Share Well) 4236 Silver Creek Rd		May 2017	~~1~~						1			
4314 Silver Creek Rd		June 2014	~~1~~						1			
Sentinel Zone 5-Year Wells (sample every 5th year)												
4219 Viebahn St		Oct 2015								1		
3121 Hecker Rd		Oct 2015								1		
3720 Hecker Rd		March 2016									1	
3627 Hecker Rd		May 2017	~~1~~									May 2022
2706 CTH CR		Oct 2016										1
4125 CTH CR		May 2017	~~1~~									May 2022
3318 Orchard Ln.		Oct 2016										1
3420 Orchard Ln.		Oct 2016										1
3524 Orchard Ln.		Oct 2015								1		
3710 Silver Creek Rd		May 2017	~~1~~									May 2022
3780 Silver Creek Rd		May 2017	~~1~~									May 2022
3802 Silver Creek Rd		May 2017	~~1~~									May 2022
3812 Silver Creek Rd		January 2016									1	
3902 Silver Creek Rd		Oct 2016										1
4004 Silver Creek Rd		Oct 2015								1		
4156 Silver Creek Rd		March 2016									1	
4315 Silver Creek Rd		May 2017	~~1~~									May 2022
Replacement Wells (sample every 5th year)												
3303 Hecker Rd		Oct 2016										1
3515 Hecker Rd		Oct 2016										1
3518 Hecker Rd		Oct 2016										1
3609 Hecker Rd		Oct 2016										1
3023 CTH CR		Oct 2016										1
3120 CTH CR		Oct 2016										1
3403 CTH CR		Oct 2016										1
3504 CTH CR		Feb 2017	~~1~~									1
4002 Thunder Ridge Rd		Oct 2016										1
4005 Thunder Ridge Rd		May 2017	~~1~~									May 2022
4010 Thunder Ridge Rd		May 2017	~~1~~									May 2022

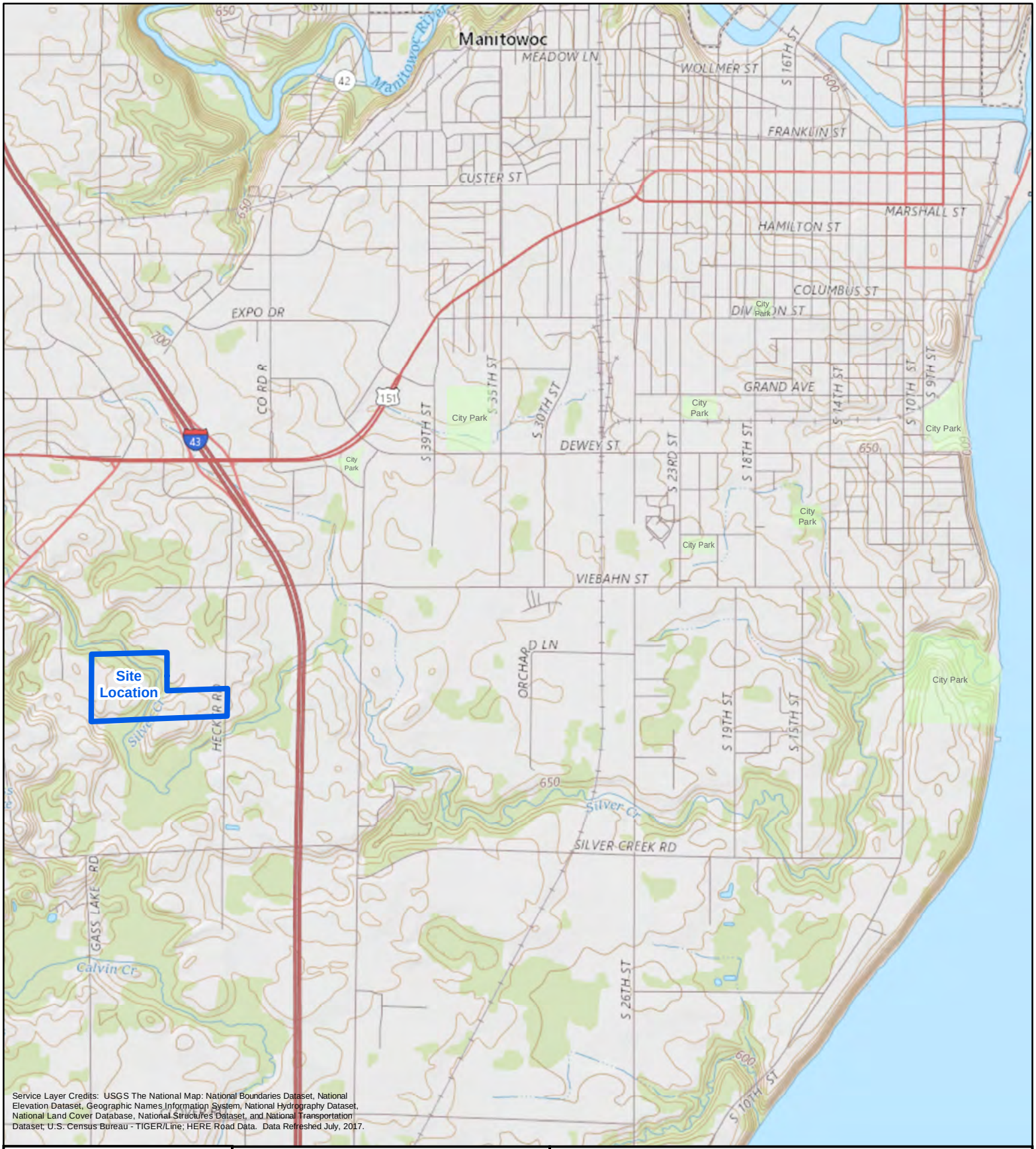
SUMMARY OF FIVE YEAR POTABLE WELL SAMPLING PLAN (UPDATED JUNE 2017)
FORMER TOWN OF NEWTON GRAVEL PIT
MANITOWOC, WISCONSIN

Well Address	Map Color Code	Date of Previous Sampling Event	2017		2018		2019		2020		2021	
			May	October	May	October	May	October	May	October	May	October
Historically Sampled Wells												
5107 Veibahn St	▲	December 2013	Wells are typically up-gradient or side gradient - no additional sampling anticipated									
2925 Fricke Rd	▲	Feb 1993										
3107 Fricke Rd	▲	December 2013										
3610 Gass Lake Rd	▲	Feb 1993										
3609 M&M Ln	▲	December 2013										
3717 M&M Ln	▲	Feb 1993										
3840 M&M Ln	▲	Feb 1993										
3114 Hecker Rd	▲	May 2014										
2881 CTH CR	▲	Well Out of Service										
4314 Silver Creek Rd	▲	June 2014										
4609 Silver Creek Rd	▲	June 2014										
4620 Silver Creek Rd (two wells)	▲	May 2014										
4752 Silver Creek Rd	▲	June 2014										
4808 Silver Creek Rd	▲	May 2014										
5202 Silver Creek Rd	▲	December 2013										
3523 Orchard Ln	▲	May 2014										
Former Potable Wells Now Connected to City Water												
3617(3621) Viebahn St	○	March 2016	City Water Provided - No Potable Well Sampling Required									
3701 Viebahn St	○	Oct 2015										
3815 Viebahn St	○	Oct 2015										
4025 Viebahn St	○	Oct 2015										
4101 Viebahn St	○	Oct 2015										
2716 CTH CR (4141 Viebahn St)	○	Oct 2015										
2734(2804) CTH CR	○	Oct 2015										
2916 CTH CR	○	Oct 2015										
2917 CTH CR	○	Oct 2015										
		Wells Sampled per Event	~~24~~	~~26~~	12	29	13	29	15	30	15	42

Notes:
~~1~~ indicates sample has been collected and the sampling event is complete

Figures:

Figure 1; Site Location
Figure 2; May 2018 Potable Well Sampling Results



Service Layer Credits: USGS The National Map: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data. Data Refreshed July, 2017.

Map Location

0 1,250 2,500 5,000 Feet

FORMER NEWTON GRAVEL PIT

SITE LOCATION MAP

AECOM - Milwaukee Office
1555 River Center Dr
Milwaukee WI

AECOM

Project No. 60135471 | Drawn By: RW | Date: June 2018

Figure 1

FORMER NEWTON GRAVEL PIT

TOWN OF MANITOWOC RAPIDS

TOWN OF NEWTON

CITY OF MANITOWOC

TOWN OF MANITOWOC

2925 Fricke Dr
Well Depth = NA

3107 Fricke Dr
Location No. 11 from 1993 Sampling
Well Depth = 200 ft (Limestone)

3187 Fricke Dr
Well Depth = 200 ft (Limestone)

5107 Viebahn St
Well Depth = 189 ft (Limestone)

3114 Hecker Rd
Well Depth = 153 ft (Limestone)

3121 Hecker Rd
Well Depth = NA

3353 Hecker Rd
Well Depth = 143 ft (Historic well, limestone)
Well Depth = 303 ft (New well, limestone)

3320 Hecker Rd
Well Depth = 138 ft (Limestone)

3327 Hecker Rd
Well Depth = NA
cis-1,2-Dichloroethene = 4.5 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

3401(3417) Hecker Rd
Well Depth = NA
cis-1,2-Dichloroethene = 1.87 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

3515 Hecker Rd
Well Depth = 52 ft (Historic well, gravel)
Well Depth = 300 ft (New well, limestone)

3518 Hecker Rd
Well Depth = 69 ft (Historic well, gravel)
Well Depth = 282 ft (New well, limestone)

3609 Hecker Rd
Well Depth = 68 ft (Historic well, gravel)
Well Depth = 300 ft (New well, limestone)

3625 Hecker Rd
Well Depth = 105 ft (Gravel)

3627 Hecker Rd
Well Depth = NA

3720 Hecker Rd
Well Depth = NA

3702 Hecker Rd
Well Depth = 160 ft (Limestone/Dolomite)
cis-1,2-Dichloroethene = < 0.37 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

3610 Gass Lake
Well Depth = NA

3609 M and M Lo
Well Depth = 108 ft (Gravel)

3717 M and M Lo
Well Depth = NA

3640 M and M Lo
Well Depth = 126 ft (Gravel)

5202 Silver Creek Rd
Well Depth = NA

4808 Silver Creek Rd
Well Depth = 105 ft (Gravel)

4752 Silver Creek Rd
Well Depth = 93 ft (Gravel)

4620 Silver Creek Rd
Well Depth = 160 ft (Limestone/Dolomite)

4609 Silver Creek Rd
Well Depth = 78 ft (Gravel)

2706 CTH CR
Well Depth = NA

4219 Viebahn St
Well Depth = NA

2716 CTH CR
Well Depth = NA

2734/2804 CTH CR
Well Depth = 132 ft (Abandoned - Gravel)
Connected to city water in 2016

2832 and 2904 CTH CR
Well Depth = NA

2881 CTH CR (not in use)
Well Depth = NA

2911 CTH CR
Well Depth = NA

2916 CTH CR
Well Depth = 139 ft (Abandoned - Limestone)
Connected to city water in 2016

2917 CTH CR
Well Depth = 162 ft (Abandoned - Limestone)
Connected to city water in 2016

3120 CTH CR
Well Depth = 51 ft (Historic well, gravel?)
Well Depth = 305 ft (New well, limestone)

3012 CTH CR
Well Depth = 160 ft (Historic well, limestone)
Well Depth = 308 ft (New well, limestone)

3024 CTH CR
Well Depth = NA

3312 CTH CR
Well Depth = NA

3322 CTH CR
Well Depth = NA

3412 CTH CR
Well Depth = NA

3422 CTH CR
Well Depth = NA

3504 CTH CR
Well Depth = 180 ft (Historic well, limestone)
Well Depth = 320 ft (New well, limestone)

3618 CTH CR
Well Depth = NA
cis-1,2-Dichloroethene = 1.23 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

3626 CTH CR/3626 CTH CR B
Well Depth = NA

3611 CTH CR
Well Depth = NA

3627 CTH CR
Well Depth = NA

3523 CTH CR
Well Depth = 250 ft (Limestone)

3533 CTH CR
Well Depth = 40 to 50 ft (Gravel)

4127 Thunder Ridge
Well Depth = 220 ft (Limestone)

3804 CTH CR
Well Depth = 84 ft (Gravel)

4236 Silver Creek Rd
4220 Silver Creek Rd
4212 Silver Creek Rd
Well Depth = NA

4314 Silver Creek Rd
Well Depth = NA

4315 Silver Creek Rd
Well Depth = 200 ft (Limestone)

4111 Thunder Ridge Rd
Well Depth = 220 ft (Limestone)
cis-1,2-Dichloroethene = 1.05 (5/21/2018)
cis-1,2-Dichloroethene = 0.55 J (5/31/2018)
Vinyl chloride = 0.21 (5/21/2018)
Vinyl chloride = < 0.2 (5/31/2018)

4156 Silver Creek Rd
Well Depth = NA

4024 CTH CR
Well Depth = 168 ft (Limestone)

4101 CTH CR
Well Depth = NA

4125 CTH CR
Well Depth = 105 ft (Gravel)

4602 Thunder Ridge Rd
Well Depth = 200 ft (Historic well, limestone)
Well Depth = 420 ft (New well, limestone)

4610 Thunder Ridge Rd
Well Depth = 200 ft (Historic well, limestone)
Well Depth = 400 ft (New well, limestone)

4027 Thunder Ridge Rd
Well Depth = 201 ft (Limestone)
cis-1,2-Dichloroethene = 1.32 (5/21/2018)
cis-1,2-Dichloroethene = 1 J (5/31/2018)
Vinyl chloride = 0.26 (5/21/2018)
Vinyl chloride = < 0.2 (5/31/2018)

4004 Silver Creek Rd
Well Depth = NA

4159 Silver Creek Rd
Well Depth = 181 ft (Limestone)
cis-1,2-Dichloroethene = 0.94 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

4101 Viebahn St
Well Depth = 131 ft (Abandoned - Limestone?)
Connected to city water in 2016

4025 Viebahn St
Well Depth = 138 ft (Abandoned - Limestone)
Connected to city water in 2016

3825 Viebahn St
Well Depth = NA

3815 Viebahn St
Well Depth = 125 ft (Abandoned - Gravel)
Connected to city water in 2016

4141 Viebahn St / 4717 CTH CR
Well Depth = 146 ft (Non-Potable well - Limestone)
Connected to city water in 2016

3817 Viebahn St
Well Depth = 129 ft (Gravel)
cis-1,2-Dichloroethene = 0.7 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

3731 Viebahn St
Well Depth = 147 ft (Abandoned - Limestone)
Connected to city water in 2016

3617(3621) Viebahn St
Well Depth = 166 ft (Abandoned - Limestone)
Connected to city water in 2016

3921 Black Hawk Ct
Well Depth = 182 ft (Limestone)
cis-1,2-Dichloroethene = 0.95 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

3911 Black Hawk Ct
Well Depth = 180 ft (Limestone)
cis-1,2-Dichloroethene = 0.58 (5/21/2018)
Vinyl chloride = < 0.2 (5/21/2018)

3527 Orchard Ln
Well Depth = NA
cis-1,2-Dichloroethene = < 0.37 (5/31/2018)
Vinyl chloride = < 0.2 (5/31/2018)

3138 Orchard Ln
Well Depth = 142 ft (Limestone)

3318 Orchard Ln
Well Depth = NA

3420 Orchard Ln
Well Depth = NA

3524 Orchard Ln
Well Depth = NA

3523 Orchard Ln
Well Depth = NA

2718 S 26TH St
Well Depth = 148 ft (Historic well, limestone)
Well Depth = 469 ft (New well, limestone)
cis-1,2-Dichloroethene = < 0.3 (12/11/2017)
Vinyl chloride = < 0.2 (12/11/2017)

3008 S 26TH St
Well Depth = 160 ft (Limestone?)
cis-1,2-Dichloroethene = 1 (11/8/2017)
Vinyl chloride = 0.47 (11/8/2017)
cis-1,2-Dichloroethene = 0.85 (12/14/2017)
Vinyl chloride = 0.55 (12/14/2017)

2715 S 26TH St
Well Depth = NA
cis-1,2-Dichloroethene = < 0.3 (12/14/2017)
Vinyl chloride = < 0.2 (12/14/2017)

2501 Nelson Lane
Well Depth = NA
cis-1,2-Dichloroethene = < 0.3 (12/19/2017)
Vinyl chloride = < 0.2 (12/19/2017)

2514 Elm Road
Well Depth = NA
cis-1,2-Dichloroethene = < 0.3 (12/19/2017)
Vinyl chloride = < 0.2 (12/19/2017)

3203 S 26TH St
Well Depth = NA
cis-1,2-Dichloroethene = < 0.3 (12/19/2017)
Vinyl chloride = < 0.2 (12/19/2017)

2417 Elm Road
Well Depth = NA
cis-1,2-Dichloroethene = < 0.3 (12/19/2017)
Vinyl chloride = < 0.2 (12/19/2017)

2408 Elm Road
Well Depth = NA
cis-1,2-Dichloroethene = < 0.3 (12/19/2017)
Vinyl chloride = < 0.2 (12/19/2017)

2201 Elm Road
Well Depth = NA
cis-1,2-Dichloroethene = 0.51 (12/19/2017)
Vinyl chloride = < 0.2 (12/19/2017)
cis-1,2-Dichloroethene = 0.55 (2/24/2018)
Vinyl chloride = 0.2 (2/24/2018)

3785 Silver Creek Rd
Well Depth = NA

3802 Silver Creek Rd
Well Depth = 161 ft (Limestone)

3812 Silver Creek Rd
Well Depth = NA

3902 Silver Creek Rd
Well Depth = 180 ft (Limestone)

3710 Silver Creek Rd
Well Depth = 180 ft (Limestone)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Within Target Zone, With Detects
- Within Target Zone, With No Detects
- Former Target Zone Well, With Detects, But Now On City Water
- Within Sentinel Zone - 3 Year, With No Detects
- Within Sentinel Zone - 5 Year, With No Detects
- Replacement Well Within Target Zone, With No Detects
- Historically Sampled Wells, With No Detects
- Well Out Of Service
- Site Location
- DNR Special Well Casing Depth Area
- Target Zone
- Inferred Target Zone
- 3 Year Sentinel Zone
- Inferred 3 Year Sentinel Zone
- 5 Year Sentinel Zone
- Inferred 5 Year Sentinel Zone
- Former Gravel Pit Zone
- Utility Water Line
- Municipality Boundaries
- Parcels
- Streams
- Building Footprints
- Current Sampling Results

NOTES:

1. Units are presented in micrograms per Liter (ug/L)

N

0 250 500 1,000 Feet

AECOM
Milwaukee Office
1555 River Center Dr
Milwaukee WI

AECOM

FORMER NEWTON GRAVEL PIT

MAY 2018
POTABLE WELL SAMPLING RESULTS

Project No.
60135471

Drawn By:
RW

Date:
September 2018

FIGURE 2

C:\data\Projects\Newton\GIP\MXD\Fig2_22x34_NewtonGP_May2018_FINAL.mxd

Attachment A:

Laboratory Reports

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #: **ANITA MOORE** *Sample #:* **353508001**
Collection Start: **11/08/2017 09:09 am** *Collection End:* **11/08/2017 09:09 am**
Collected by: **JIM KASDORF** *Waterbody/Outfall Id:*
ID #: *ID Point #:* **SPIGOT W SIDE**
County: **Manitowoc** *Account #:* **RR051**
Sample Location: **3008 SOUTH 26TH STREET NEWTON, WI 54420**
Sample Description:
Sample Source: **Private (other)** *Sample Depth:*
Date Reported: **11/16/2017** *Sample Status:* **COMPLETE**
Project No: *Sample Reason:*
Comment:

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**11/14/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**0.0**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**0.0**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**0.0**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**1.0**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**0.0**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	1,3,5-TRIMETHYLBENZENE	0.0	ug/L	0.20		0.64
34566	1,3-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77173	1,3-DICHLOROPROPANE	0.0	ug/L	0.30		0.95
34704	1,3-DICHLOROPROPENE-CIS	0.0	ug/L	0.30		0.95
34699	1,3-DICHLOROPROPENE-TRANS	0.0	ug/L	0.50		1.6
34571	1,4-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77170	2,2-DICHLOROPROPANE	0.0	ug/L	0.50		1.6
77275	2-CHLOROTOLUENE	0.0	ug/L	0.30		0.95
81552	ACETONE	0.0	ug/L	3.0		9.5
34030	BENZENE	0.0	ug/L	0.30		0.95
81555	BROMOBENZENE	0.0	ug/L	0.50		1.6
77297	BROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
32101	BROMODICHLOROMETHANE	0.0	ug/L	0.50		1.6
32104	BROMOFORM	0.0	ug/L	1.0		3.2
34413	BROMOMETHANE	0.0	ug/L	0.50		1.6
77350	BUTYLBENZENE SEC	0.0	ug/L	0.20		0.64
77353	BUTYLBENZENE TERT	0.0	ug/L	0.50		1.6
77041	CARBON DISULFIDE	0.0	ug/L	0.30		0.95
32102	CARBON TETRACHLORIDE	0.0	ug/L	0.50		1.6
34301	CHLOROBENZENE	0.0	ug/L	0.25		0.80
34311	CHLOROETHANE	0.0	ug/L	0.50		1.6
32106	CHLOROFORM	0.0	ug/L	0.25		0.80
34418	CHLOROMETHANE	0.0	ug/L	1.0		3.2
32105	DIBROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
77596	DIBROMOMETHANE	0.0	ug/L	0.50		1.6
34668	DICHLORODIFLUOROMETHANE	0.0	ug/L	0.50		1.6
	Comment: The Lower QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the lower QC limit.					
81577	DIISOPROPYL ETHER	0.0	ug/L	0.25		0.80
34371	ETHYLBENZENE	0.0	ug/L	0.20		0.64
34391	HEXACHLOROBUTADIENE	0.0	ug/L	0.50		1.6
81590	HEXANE, MIXTURE OF ISOMERS	0.0	ug/L	0.50		1.6
77223	ISOPROPYLBENZENE	0.0	ug/L	0.20		0.64
85795	M/P-XYLENE	0.0	ug/L	0.40		1.3

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
81595	**METHYL ETHYL KETONE**	**0.0**	ug/L	3.0		9.5
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**0.0**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**0.0**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**0.0**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**0.0**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**0.0**	ug/L	0.30		0.95
77135	**O-XYLENE**	**0.0**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**0.0**	ug/L	0.20		0.64
77128	**STYRENE**	**0.0**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**0.0**	ug/L	2.0		6.4
34010	**TOLUENE**	**0.0**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The Lower QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the lower QC limit.					
81611	**TRICHLOROTRIFLUOROETHANE**	**0.0**	ug/L	0.50		1.6
39175	**VINYL CHLORIDE**	**0.47**	ug/L	0.20		0.64

State of Wisconsin
Department of Natural Resources
and Laboratory of Hygiene

Test Request – Organic

Form 4800-016 (R 7/14) Page 1 of 2

Billing and Reporting

Account Number	Field Number (Bottle Label ID)	Report to Address (Non-DNR only)		
RR051	ANITA MOORE			
DNR User ID	**Report To Name**	**City**	**State**	**ZIP**
KASDORFJ	JIM KASDORF	DNR-HORICON	WI	
Date Results Needed (mm/dd/yyyy)		**Report to Email (Non-DNR only)**		

Date and Time of Sample Collection

Date (mm/dd/yyyy)	Time (24-hr clock)	End Date (mm/dd/yyyy)	End Time
11/08/2017	0909 AM	11/08/2017	

Sample Type

Sample Type: (select one)

- ○ SU Surface Water
- ○ NP Storm Water
- ○ EF Effluent (Treated Wastewater)
- ○ IF Influent (Untreated wastewater)
- ○ D Public Drinking Water
- ○ MW Monitoring Well
- ⊗ PO Private Well
- ○ SE Sediment
- ○ SL Sludge
- ○ SO Soil
- ○ TI Tissue
- ○ _____

Who collected the sample

Collected By Name	Telephone	Email
Jim KASDORF (DNR)	715 519-9729	James.KasdorfJR@Wisconsin.gov

Where the sample was collected

Station ID (STORET #)	Sample Address or Location Description	
	3033 South 26TH STREET Newton, WI 54220	
County	**Waterbody ID (WBIC)**	**Point / Outfall (or SWIMS Fieldwork Seq No)**
Manitowoc	N/A	SPIGOT WEST SIDE of HOME

Sample Details

Sample Description / Device Description

11/09/17 10:51
TB
353508002

Enforcement? ○ Yes ⊗ No
If yes, include chain of custody form.

If Field QC Sample (select one):
○ Duplicate ○ Blank ○ _____

_____ ○ ft ○ m ○ in ○ cm

Is Sample Disinfected? ○ Yes ⊗ No
If yes, how? _____

Grant or Project Number

.om of Sample Interval:
_____ - _____ ○ ft ○ m ○ in ○ cm

Analyses Requested

VOCs Water / Soil (check one of the following)

Disinfection Byproducts
- ☐ Haloacetic Acids (552.3)
- ☐ Total Trihalomethanes

☒ Quantification (EPA Method 8260)
☐ Quantification (Drinking Water-EPA Method 524.2)

Non-VOC Scan
- ☐ EPA 525
- ☐ LCMS Scan

Halogenated Compounds
- ☐ PCB Aroclor Identification
- ☐ PCB Congeners
- ☐ PBDEs
- ☐ Perfluorinated Compounds

Petroleum Products
- ☐ Petroleum Fingerprint
- ☐ PAHs (GCMS)

Pesticides
- ☐ List in additional parameters section to the right

Others
- ☐ Glycols
- ☐ Benzotriazoles
- ☐ ganic Carbon (Field Filtered? ☐ Yes ☐ No)
- ntaminants

Toxicity Characteristic Leaching Procedure (TCLP)
(Check one or more of the following)
- ☐ VOCs - TCLP
- ☐ Haz. Waste Char

Additional Parameters

TEMP	HNO3	pH
Ray Gun Glass 1 Plastic 6 8 Co ☒ ICED VK	ID's IN/AN336 Bottle ID A B C D E F G	pH R2 22 14 Bottle ID A B C D E F G

11/09/17 10:51
ANITA MOORE
353508001

11/09/17 10:51
RR051
353508

For lab use:
Sample Tem
☐ Iced

Please enclose this form in the mailer along with the sample and send to the State Lab of Hygiene.

Field Parameters - Optional **Only fill out if directed by your project coordinator.**

Temperature - Sample (°C)			Gage Height (ft)	
Temperature - Ambient Air (°C)			Flow (cfs)	
DO (mg/l)			Flow (MGD)	
% Saturation			Depth to Groundwater	ft or m
pH (su)			Turbidity (NTU)	
Secchi Depth (feet or meters)	ft or m		Transparency Tube (cm)	
Secchi Depth Hit Bottom?		☐ Yes ☐ No	Nitrates (mg/l)	
Cloud Cover (%)				
Cond (µS/CM@25°C)				

Tips

See Chapter 4 "Lab Slips" of the Field Procedures Manual (see http://intranet.dnr.state.wi.us/int/es/science/ls/Forms/Instructions.htm) for further instructions and definitions.

The **Account Number** must be completed in order for the samples to be billed to the correct funding source. If you are unsure what the proper account number is refer to http://intranet/int/es/science/ls/Account.htm or contact the DNR Laboratory Coordinator or the State Laboratory of Hygiene.

The **Lake Grant or Project Number field** should include the Lake Planning Grant Number or the Project Number.

Sample Depth – If you sample in a lake, this is required.

Field Parameters – If you do fill this out, the data will go into SWIMS automatically. Please do not re-enter. Also, you must QA the data once it arrives in SWIMS.

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 *14-Dec-17*

Project Name NEWTON GRAVEL PIT **Invoice #** E34024
Project # 60135471

Lab Code 5034024A
Sample ID 2918 26TH-RAW
Sample Matrix Water
Sample Date 12/11/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Iron, Total	14.5	mg/l	0.03	0.1	1	200.7		12/12/2017	CWT	1
Organic										
VOC's										
Benzene	< 0.17	ug/l	0.17	0.55	1	8260B		12/12/2017	CJR	1
Bromobenzene	< 0.43	ug/l	0.43	1.37	1	8260B		12/12/2017	CJR	1
Bromodichloromethane	< 0.31	ug/l	0.31	1	1	8260B		12/12/2017	CJR	1
Bromoform	< 0.49	ug/l	0.49	1.56	1	8260B		12/12/2017	CJR	1
tert-Butylbenzene	< 0.39	ug/l	0.39	1.23	1	8260B		12/12/2017	CJR	1
sec-Butylbenzene	< 0.24	ug/l	0.24	0.76	1	8260B		12/12/2017	CJR	1
n-Butylbenzene	< 0.34	ug/l	0.34	1.08	1	8260B		12/12/2017	CJR	1
Carbon Tetrachloride	< 0.21	ug/l	0.21	0.68	1	8260B		12/12/2017	CJR	1
Chlorobenzene	< 0.27	ug/l	0.27	0.86	1	8260B		12/12/2017	CJR	1
Chloroethane	< 0.5	ug/l	0.5	1.6	1	8260B		12/12/2017	CJR	1
Chloroform	< 0.96	ug/l	0.96	3.04	1	8260B		12/12/2017	CJR	1
Chloromethane	< 1.3	ug/l	1.3	4.15	1	8260B		12/12/2017	CJR	1
2-Chlorotoluene	< 0.36	ug/l	0.36	1.15	1	8260B		12/12/2017	CJR	1
4-Chlorotoluene	< 0.35	ug/l	0.35	1.11	1	8260B		12/12/2017	CJR	1
1,2-Dibromo-3-chloropropane	< 1.88	ug/l	1.88	5.98	1	8260B		12/12/2017	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.44	1	8260B		12/12/2017	CJR	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.34	1	8260B		12/12/2017	CJR	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.43	1	8260B		12/12/2017	CJR	1
1,2-Dichlorobenzene	< 0.34	ug/l	0.34	1.09	1	8260B		12/12/2017	CJR	1
Dichlorodifluoromethane	< 0.38	ug/l	0.38	1.2	1	8260B		12/12/2017	CJR	1
1,2-Dichloroethane	< 0.45	ug/l	0.45	1.43	1	8260B		12/12/2017	CJR	1
1,1-Dichloroethane	< 0.42	ug/l	0.42	1.34	1	8260B		12/12/2017	CJR	1
1,1-Dichloroethene	< 0.46	ug/l	0.46	1.47	1	8260B		12/12/2017	CJR	1
cis-1,2-Dichloroethene	< 0.41	ug/l	0.41	1.29	1	8260B		12/12/2017	CJR	1
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.12	1	8260B		12/12/2017	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E34024
Project # 60135471

Lab Code 5034024A
Sample ID 2918 26TH-RAW
Sample Matrix Water
Sample Date 12/11/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.39	ug/l	0.39	1.24	1	8260B		12/12/2017	CJR	1
1,3-Dichloropropane	< 0.49	ug/l	0.49	1.55	1	8260B		12/12/2017	CJR	1
trans-1,3-Dichloropropene	< 0.42	ug/l	0.42	1.33	1	8260B		12/12/2017	CJR	1
cis-1,3-Dichloropropene	< 0.21	ug/l	0.21	0.65	1	8260B		12/12/2017	CJR	1
Di-isopropyl ether	< 0.26	ug/l	0.26	0.83	1	8260B		12/12/2017	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		12/12/2017	CJR	1
Ethylbenzene	< 0.2	ug/l	0.2	0.63	1	8260B		12/12/2017	CJR	1
Hexachlorobutadiene	< 1.47	ug/l	1.47	4.68	1	8260B		12/12/2017	CJR	1
Isopropylbenzene	< 0.29	ug/l	0.29	0.93	1	8260B		12/12/2017	CJR	1
p-Isopropyltoluene	< 0.28	ug/l	0.28	0.91	1	8260B		12/12/2017	CJR	1
Methylene chloride	< 0.94	ug/l	0.94	2.98	1	8260B		12/12/2017	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.82	ug/l	0.82	2.6	1	8260B		12/12/2017	CJR	1
Naphthalene	< 2.17	ug/l	2.17	6.9	1	8260B		12/12/2017	CJR	1
n-Propylbenzene	< 0.19	ug/l	0.19	0.62	1	8260B		12/12/2017	CJR	1
1,1,2,2-Tetrachloroethane	< 0.69	ug/l	0.69	2.21	1	8260B		12/12/2017	CJR	1
1,1,1,2-Tetrachloroethane	< 0.47	ug/l	0.47	1.48	1	8260B		12/12/2017	CJR	1
Tetrachloroethene	< 0.48	ug/l	0.48	1.52	1	8260B		12/12/2017	CJR	1
Toluene	< 0.67	ug/l	0.67	2.13	1	8260B		12/12/2017	CJR	1
1,2,4-Trichlorobenzene	< 1.29	ug/l	1.29	4.1	1	8260B		12/12/2017	CJR	1
1,2,3-Trichlorobenzene	< 0.83	ug/l	0.83	2.63	1	8260B		12/12/2017	CJR	1
1,1,1-Trichloroethane	< 0.35	ug/l	0.35	1.11	1	8260B		12/12/2017	CJR	1
1,1,2-Trichloroethane	< 0.65	ug/l	0.65	2.06	1	8260B		12/12/2017	CJR	1
Trichloroethene (TCE)	< 0.45	ug/l	0.45	1.43	1	8260B		12/12/2017	CJR	1
Trichlorofluoromethane	< 0.64	ug/l	0.64	2.04	1	8260B		12/12/2017	CJR	1
1,2,4-Trimethylbenzene	< 1.14	ug/l	1.14	3.63	1	8260B		12/12/2017	CJR	1
1,3,5-Trimethylbenzene	< 0.91	ug/l	0.91	2.9	1	8260B		12/12/2017	CJR	1
Vinyl Chloride	< 0.19	ug/l	0.19	0.62	1	8260B		12/12/2017	CJR	1
m&p-Xylene	< 1.56	ug/l	1.56	4.95	1	8260B		12/12/2017	CJR	1
o-Xylene	< 0.39	ug/l	0.39	1.25	1	8260B		12/12/2017	CJR	1
SUR - Toluene-d8	96	REC %			1	8260B		12/12/2017	CJR	1
SUR - Dibromofluoromethane	109	REC %			1	8260B		12/12/2017	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		12/12/2017	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		12/12/2017	CJR	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	1898	mg/l	0.74	2.46	2	200.7		12/12/2017	CWT	1
Solids, Total Dissolved	3007	mg/l	20	20	1	2540c		12/11/2017	BLE	1

Project Name NEWTON GRAVEL PIT **Invoice #** E34024
Project # 60135471

Lab Code 5034024B
Sample ID 2918 26TH-DUP
Sample Matrix Water
Sample Date 12/11/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.17	ug/l	0.17	0.55	1	8260B		12/12/2017	CJR	1
Bromobenzene	< 0.43	ug/l	0.43	1.37	1	8260B		12/12/2017	CJR	1
Bromodichloromethane	< 0.31	ug/l	0.31	1	1	8260B		12/12/2017	CJR	1
Bromoform	< 0.49	ug/l	0.49	1.56	1	8260B		12/12/2017	CJR	1
tert-Butylbenzene	< 0.39	ug/l	0.39	1.23	1	8260B		12/12/2017	CJR	1
sec-Butylbenzene	< 0.24	ug/l	0.24	0.76	1	8260B		12/12/2017	CJR	1
n-Butylbenzene	< 0.34	ug/l	0.34	1.08	1	8260B		12/12/2017	CJR	1
Carbon Tetrachloride	< 0.21	ug/l	0.21	0.68	1	8260B		12/12/2017	CJR	1
Chlorobenzene	< 0.27	ug/l	0.27	0.86	1	8260B		12/12/2017	CJR	1
Chloroethane	< 0.5	ug/l	0.5	1.6	1	8260B		12/12/2017	CJR	1
Chloroform	< 0.96	ug/l	0.96	3.04	1	8260B		12/12/2017	CJR	1
Chloromethane	< 1.3	ug/l	1.3	4.15	1	8260B		12/12/2017	CJR	1
2-Chlorotoluene	< 0.36	ug/l	0.36	1.15	1	8260B		12/12/2017	CJR	1
4-Chlorotoluene	< 0.35	ug/l	0.35	1.11	1	8260B		12/12/2017	CJR	1
1,2-Dibromo-3-chloropropane	< 1.88	ug/l	1.88	5.98	1	8260B		12/12/2017	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.44	1	8260B		12/12/2017	CJR	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.34	1	8260B		12/12/2017	CJR	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.43	1	8260B		12/12/2017	CJR	1
1,2-Dichlorobenzene	< 0.34	ug/l	0.34	1.09	1	8260B		12/12/2017	CJR	1
Dichlorodifluoromethane	< 0.38	ug/l	0.38	1.2	1	8260B		12/12/2017	CJR	1
1,2-Dichloroethane	< 0.45	ug/l	0.45	1.43	1	8260B		12/12/2017	CJR	1
1,1-Dichloroethane	< 0.42	ug/l	0.42	1.34	1	8260B		12/12/2017	CJR	1
1,1-Dichloroethene	< 0.46	ug/l	0.46	1.47	1	8260B		12/12/2017	CJR	1
cis-1,2-Dichloroethene	< 0.41	ug/l	0.41	1.29	1	8260B		12/12/2017	CJR	1
trans-1,2-Dichloroethene	< 0.35	ug/l	0.35	1.12	1	8260B		12/12/2017	CJR	1
1,2-Dichloropropane	< 0.39	ug/l	0.39	1.24	1	8260B		12/12/2017	CJR	1
1,3-Dichloropropane	< 0.49	ug/l	0.49	1.55	1	8260B		12/12/2017	CJR	1
trans-1,3-Dichloropropene	< 0.42	ug/l	0.42	1.33	1	8260B		12/12/2017	CJR	1
cis-1,3-Dichloropropene	< 0.21	ug/l	0.21	0.65	1	8260B		12/12/2017	CJR	1
Di-isopropyl ether	< 0.26	ug/l	0.26	0.83	1	8260B		12/12/2017	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		12/12/2017	CJR	1
Ethylbenzene	< 0.2	ug/l	0.2	0.63	1	8260B		12/12/2017	CJR	1
Hexachlorobutadiene	< 1.47	ug/l	1.47	4.68	1	8260B		12/12/2017	CJR	1
Isopropylbenzene	< 0.29	ug/l	0.29	0.93	1	8260B		12/12/2017	CJR	1
p-Isopropyltoluene	< 0.28	ug/l	0.28	0.91	1	8260B		12/12/2017	CJR	1
Methylene chloride	< 0.94	ug/l	0.94	2.98	1	8260B		12/12/2017	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.82	ug/l	0.82	2.6	1	8260B		12/12/2017	CJR	1
Naphthalene	< 2.17	ug/l	2.17	6.9	1	8260B		12/12/2017	CJR	1
n-Propylbenzene	< 0.19	ug/l	0.19	0.62	1	8260B		12/12/2017	CJR	1
1,1,2,2-Tetrachloroethane	< 0.69	ug/l	0.69	2.21	1	8260B		12/12/2017	CJR	1
1,1,1,2-Tetrachloroethane	< 0.47	ug/l	0.47	1.48	1	8260B		12/12/2017	CJR	1
Tetrachloroethene	< 0.48	ug/l	0.48	1.52	1	8260B		12/12/2017	CJR	1
Toluene	< 0.67	ug/l	0.67	2.13	1	8260B		12/12/2017	CJR	1
1,2,4-Trichlorobenzene	< 1.29	ug/l	1.29	4.1	1	8260B		12/12/2017	CJR	1
1,2,3-Trichlorobenzene	< 0.83	ug/l	0.83	2.63	1	8260B		12/12/2017	CJR	1
1,1,1-Trichloroethane	< 0.35	ug/l	0.35	1.11	1	8260B		12/12/2017	CJR	1
1,1,2-Trichloroethane	< 0.65	ug/l	0.65	2.06	1	8260B		12/12/2017	CJR	1
Trichloroethene (TCE)	< 0.45	ug/l	0.45	1.43	1	8260B		12/12/2017	CJR	1
Trichlorofluoromethane	< 0.64	ug/l	0.64	2.04	1	8260B		12/12/2017	CJR	1
1,2,4-Trimethylbenzene	< 1.14	ug/l	1.14	3.63	1	8260B		12/12/2017	CJR	1

Project Name NEWTON GRAVEL PIT **Invoice #** E34024
Project # 60135471

Lab Code 5034024B
Sample ID 2918 26TH-DUP
Sample Matrix Water
Sample Date 12/11/2017

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.91	ug/l	0.91	2.9	1	8260B		12/12/2017	CJR	1
Vinyl Chloride	< 0.19	ug/l	0.19	0.62	1	8260B		12/12/2017	CJR	1
m&p-Xylene	< 1.56	ug/l	1.56	4.95	1	8260B		12/12/2017	CJR	1
o-Xylene	< 0.39	ug/l	0.39	1.25	1	8260B		12/12/2017	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		12/12/2017	CJR	1
SUR - 4-Bromofluorobenzene	111	REC %			1	8260B		12/12/2017	CJR	1
SUR - Dibromofluoromethane	102	REC %			1	8260B		12/12/2017	CJR	1
SUR - Toluene-d8	96	REC %			1	8260B		12/12/2017	CJR	1

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

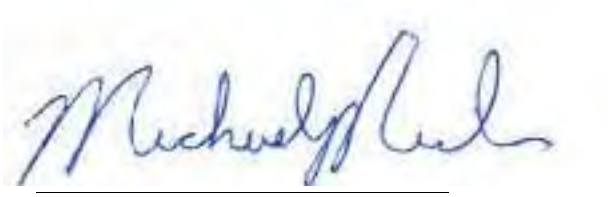
Code	*Comment*
1	Laboratory QC within limits.

BLE denotes sub contract lab - Certification #445023150

CWT denotes sub contract lab - Certification #445126660

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



CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 296.2

Page 1 of 1

Sample Handling Request
X Rush Analysis Date Required 12/13
(Rushes accepted only with prior authorization)
___ Normal Turn Around

Lab I.D. #

Account No. : | Quote No.:

Project #: 60135471

Sampler: (signature) Sarah E Krueger

Project (Name / Location): NEWTON GRAVEL PIT/MANITOWOC WI

Reports To: DAVE HENDERSON	Invoice To: SEE LEFT
Company AECOM	Company
Address 1555 N RIVER CENTER DRIVE STE 214	Address
City State Zip MILWAUKEE WI 53212	City State Zip
Phone (414) 944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	B-RCRA METALS	TDS	Total Fe	Hardness					PID/FID
5034024 A	2918 26TH-RAW	12/11/17	0845		X	N	5	GW	HCl/HNO3 -													X		X	X	X					
B	2918 26TH-DUP	12/11/17	0845		X	N	3	GW	HCl													X									

Analysis Requested | Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

ANALYSIS PER CONTRACT
dave.henderson@aecom.com

Sample Integrity - To be completed by receiving lab.
Method of Shipment: ____
Temp. of Temp. Blank ___ °C On Ice: X
Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Sarah E Krueger	1020	12/10/17			

Received in Laboratory By: ____ Time: 1012 Date: 12/11/17

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**ANITA MOORE**	*Sample #:*	**359507002**
Collection Start:	**12/14/2017 10:35 am**	*Collection End:*	**12/14/2017 10:50 am**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**SAMPLE TAP BASE**
County:	**Manitowoc**	*Account #:*	**RR051**
Sample Location:	**3008 SOUTH 26TH STREET NEWTON, WI 54420**		
Sample Description:	**PRIVATE WELL-VOC**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**01/04/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:	Associated Trip Blank (359507003) with batch VOC/1418		

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**12/28/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**ND**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**ND**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**ND**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**ND**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**ND**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**ND**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**ND**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**ND**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**ND**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**ND**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**ND**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**ND**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**ND**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**ND**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**ND**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**0.85**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**ND**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**ND**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	**1,3,5-TRIMETHYLBENZENE**	**ND**	ug/L	0.20		0.64
34566	**1,3-DICHLOROBENZENE**	**ND**	ug/L	0.25		0.80
77173	**1,3-DICHLOROPROPANE**	**ND**	ug/L	0.30		0.95
34704	**1,3-DICHLOROPROPENE-CIS**	**ND**	ug/L	0.30		0.95
34699	**1,3-DICHLOROPROPENE-TRANS**	**ND**	ug/L	0.50		1.6
34571	**1,4-DICHLOROBENZENE**	**ND**	ug/L	0.25		0.80
77170	**2,2-DICHLOROPROPANE**	**ND**	ug/L	0.50		1.6
77275	**2-CHLOROTOLUENE**	**ND**	ug/L	0.30		0.95
81552	**ACETONE**	**ND**	ug/L	3.0		9.5
34030	**BENZENE**	**ND**	ug/L	0.30		0.95
81555	**BROMOBENZENE**	**ND**	ug/L	0.50		1.6
77297	**BROMOCHLOROMETHANE**	**ND**	ug/L	0.50		1.6
32101	**BROMODICHLOROMETHANE**	**ND**	ug/L	0.50		1.6
32104	**BROMOFORM**	**ND**	ug/L	1.0		3.2
34413	**BROMOMETHANE**	**ND**	ug/L	0.50		1.6
77350	**BUTYLBENZENE SEC**	**ND**	ug/L	0.20		0.64
77353	**BUTYLBENZENE TERT**	**ND**	ug/L	0.50		1.6
77041	**CARBON DISULFIDE**	**ND**	ug/L	0.30		0.95
32102	**CARBON TETRACHLORIDE**	**ND**	ug/L	0.50		1.6
34301	**CHLOROBENZENE**	**ND**	ug/L	0.25		0.80
34311	**CHLOROETHANE**	**ND**	ug/L	0.50		1.6
32106	**CHLOROFORM**	**ND**	ug/L	0.25		0.80
34418	**CHLOROMETHANE**	**ND**	ug/L	1.0		3.2
32105	**DIBROMOCHLOROMETHANE**	**ND**	ug/L	0.50		1.6
77596	**DIBROMOMETHANE**	**ND**	ug/L	0.50		1.6
34668	**DICHLORODIFLUOROMETHANE**	**ND**	ug/L	0.50		1.6
81577	**DIISOPROPYL ETHER**	**ND**	ug/L	0.25		0.80
34371	**ETHYLBENZENE**	**ND**	ug/L	0.20		0.64
34391	**HEXACHLOROBUTADIENE**	**ND**	ug/L	0.50		1.6
81590	**HEXANE, MIXTURE OF ISOMERS**	**ND**	ug/L	0.50		1.6
77223	**ISOPROPYLBENZENE**	**ND**	ug/L	0.20		0.64
85795	**M/P-XYLENE**	**ND**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**ND**	ug/L	3.0		9.5
78133	**METHYL ISOBUTYL KETONE**	**ND**	ug/L	2.0		6.4

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
	(MIBK)					
78032	**METHYL TERT BUTYL ETHER**	**ND**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**ND**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**ND**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**ND**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**ND**	ug/L	0.30		0.95
77135	**O-XYLENE**	**ND**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**ND**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**ND**	ug/L	0.20		0.64
77128	**STYRENE**	**ND**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**ND**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**ND**	ug/L	2.0		6.4
34010	**TOLUENE**	**ND**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**ND**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**ND**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**ND**	ug/L	0.50		1.6
	Comment: The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**0.55**	ug/L	0.20		0.64

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #: **DAVE MEYER**
Collection Start: **12/19/2017 04:30 pm**
Collected by: **JIM KASDORF**
ID #:
County: **Manitowoc**
Sample Location: **3203 SOUTH 26TH STREET**
Sample Description: **PRIVATE WELL SAMPLE**
Sample Source: **Private (other)**
Date Reported: **01/02/2018**
Project No:
Comment: Trip Blank broken upon reciept

Sample #: **360201007**
Collection End: **12/19/2017 05:00 pm**
Waterbody/Outfall Id:
ID Point #: **TAP BASEMENT**
Account #: **RR051**
Sample Depth:
Sample Status: **COMPLETE**
Sample Reason:

Analyses and Results:

Analysis Method **EPA 8260B in Water** *Analysis Date* **12/21/2017** *Lab Comment*

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**0.0**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**0.0**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**0.0**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**0.0**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**0.0**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	1,3,5-TRIMETHYLBENZENE	0.0	ug/L	0.20		0.64
34566	1,3-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77173	1,3-DICHLOROPROPANE	0.0	ug/L	0.30		0.95
34704	1,3-DICHLOROPROPENE-CIS	0.0	ug/L	0.30		0.95
34699	1,3-DICHLOROPROPENE-TRANS	0.0	ug/L	0.50		1.6
34571	1,4-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77170	2,2-DICHLOROPROPANE	0.0	ug/L	0.50		1.6
77275	2-CHLOROTOLUENE	0.0	ug/L	0.30		0.95
81552	ACETONE	0.0	ug/L	3.0		9.5
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					
34030	BENZENE	0.0	ug/L	0.30		0.95
81555	BROMOBENZENE	0.0	ug/L	0.50		1.6
77297	BROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
32101	BROMODICHLOROMETHANE	0.0	ug/L	0.50		1.6
32104	BROMOFORM	0.0	ug/L	1.0		3.2
34413	BROMOMETHANE	0.0	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
77350	BUTYLBENZENE SEC	0.0	ug/L	0.20		0.64
77353	BUTYLBENZENE TERT	0.0	ug/L	0.50		1.6
77041	CARBON DISULFIDE	0.0	ug/L	0.30		0.95
32102	CARBON TETRACHLORIDE	0.0	ug/L	0.50		1.6
34301	CHLOROBENZENE	0.0	ug/L	0.25		0.80
34311	CHLOROETHANE	0.0	ug/L	0.50		1.6
32106	CHLOROFORM	0.0	ug/L	0.25		0.80
34418	CHLOROMETHANE	0.0	ug/L	1.0		3.2
32105	DIBROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
77596	DIBROMOMETHANE	0.0	ug/L	0.50		1.6
34668	DICHLORODIFLUOROMETHANE	0.0	ug/L	0.50		1.6
81577	DIISOPROPYL ETHER	0.0	ug/L	0.25		0.80
34371	ETHYLBENZENE	0.0	ug/L	0.20		0.64
34391	HEXACHLOROBUTADIENE	0.0	ug/L	0.50		1.6
81590	HEXANE, MIXTURE OF ISOMERS	0.0	ug/L	0.50		1.6
77223	ISOPROPYLBENZENE	0.0	ug/L	0.20		0.64

Code	Description	Result	Units	LOD	Report Limit	LOQ
85795	**M/P-XYLENE**	**0.0**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**0.0**	ug/L	3.0		9.5
	Comment: The relative percent difference for the matrix spike and matrix spike duplicate does not meet the QC limit.					
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**0.0**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**0.0**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**0.0**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**0.0**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**0.0**	ug/L	0.30		0.95
77135	**O-XYLENE**	**0.0**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**0.0**	ug/L	0.20		0.64
77128	**STYRENE**	**0.0**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**0.0**	ug/L	2.0		6.4
34010	**TOLUENE**	**0.0**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**0.0**	ug/L	0.20		0.64
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**JOSEPH HIGGINS**	*Sample #:*	**360201001**
Collection Start:	**12/19/2017 06:50 am**	*Collection End:*	**12/19/2017 07:14 pm**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**BASEMENT TAP**
County:	**Manitowoc**	*Account #:*	**RR051**
Sample Location:	**2514 ELM ROAD**		
Sample Description:	**BASEMENT SAMPLE TAPMANITOWOC, WI**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**01/02/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:			

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**12/21/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**0.0**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**0.0**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**0.0**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**0.0**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**0.0**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	1,3,5-TRIMETHYLBENZENE	0.0	ug/L	0.20		0.64
34566	1,3-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77173	1,3-DICHLOROPROPANE	0.0	ug/L	0.30		0.95
34704	1,3-DICHLOROPROPENE-CIS	0.0	ug/L	0.30		0.95
34699	1,3-DICHLOROPROPENE-TRANS	0.0	ug/L	0.50		1.6
34571	1,4-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77170	2,2-DICHLOROPROPANE	0.0	ug/L	0.50		1.6
77275	2-CHLOROTOLUENE	0.0	ug/L	0.30		0.95
81552	ACETONE	0.0	ug/L	3.0		9.5
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					
34030	BENZENE	0.0	ug/L	0.30		0.95
81555	BROMOBENZENE	0.0	ug/L	0.50		1.6
77297	BROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
32101	BROMODICHLOROMETHANE	0.0	ug/L	0.50		1.6
32104	BROMOFORM	0.0	ug/L	1.0		3.2
34413	BROMOMETHANE	0.0	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
77350	BUTYLBENZENE SEC	0.0	ug/L	0.20		0.64
77353	BUTYLBENZENE TERT	0.0	ug/L	0.50		1.6
77041	CARBON DISULFIDE	<0.69	ug/L	0.30		0.95
	Comment: Interference					
32102	CARBON TETRACHLORIDE	0.0	ug/L	0.50		1.6
34301	CHLOROBENZENE	0.0	ug/L	0.25		0.80
34311	CHLOROETHANE	0.0	ug/L	0.50		1.6
32106	CHLOROFORM	0.0	ug/L	0.25		0.80
34418	CHLOROMETHANE	0.0	ug/L	1.0		3.2
32105	DIBROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
77596	DIBROMOMETHANE	0.0	ug/L	0.50		1.6
34668	DICHLORODIFLUOROMETHANE	0.0	ug/L	0.50		1.6
81577	DIISOPROPYL ETHER	0.0	ug/L	0.25		0.80
34371	ETHYLBENZENE	0.0	ug/L	0.20		0.64
34391	HEXACHLOROBUTADIENE	0.0	ug/L	0.50		1.6
81590	HEXANE, MIXTURE OF ISOMERS	0.0	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77223	**ISOPROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
85795	**M/P-XYLENE**	**0.0**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**0.0**	ug/L	3.0		9.5
	Comment: The relative percent difference for the matrix spike and matrix spike duplicate does not meet the QC limit.					
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**0.0**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**0.0**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**0.0**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**0.0**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**0.0**	ug/L	0.30		0.95
77135	**O-XYLENE**	**0.0**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**0.0**	ug/L	0.20		0.64
77128	**STYRENE**	**0.0**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**0.0**	ug/L	2.0		6.4
34010	**TOLUENE**	**0.0**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**0.0**	ug/L	0.20		0.64
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**KAEO KAEOVONGPHET**	*Sample #:*	**360201005**
Collection Start:	**12/19/2017 02:58 pm**	*Collection End:*	**12/19/2017 03:20 pm**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**BASEMENT TAP**
County:	**Manitowoc**	*Account #:*	**RR051**
Sample Location:	**2501 NELSON LANE**		
Sample Description:	**PRIVATE WELL**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**01/02/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:	Trip Blank broken upon reciept		

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**12/21/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**0.0**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**0.0**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**0.0**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**0.0**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**0.0**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	1,3,5-TRIMETHYLBENZENE	0.0	ug/L	0.20		0.64
34566	1,3-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77173	1,3-DICHLOROPROPANE	0.0	ug/L	0.30		0.95
34704	1,3-DICHLOROPROPENE-CIS	0.0	ug/L	0.30		0.95
34699	1,3-DICHLOROPROPENE-TRANS	0.0	ug/L	0.50		1.6
34571	1,4-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77170	2,2-DICHLOROPROPANE	0.0	ug/L	0.50		1.6
77275	2-CHLOROTOLUENE	0.0	ug/L	0.30		0.95
81552	ACETONE	0.0	ug/L	3.0		9.5
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					
34030	BENZENE	0.0	ug/L	0.30		0.95
81555	BROMOBENZENE	0.0	ug/L	0.50		1.6
77297	BROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
32101	BROMODICHLOROMETHANE	0.0	ug/L	0.50		1.6
32104	BROMOFORM	0.0	ug/L	1.0		3.2
34413	BROMOMETHANE	0.0	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
77350	BUTYLBENZENE SEC	0.0	ug/L	0.20		0.64
77353	BUTYLBENZENE TERT	0.0	ug/L	0.50		1.6
77041	CARBON DISULFIDE	0.0	ug/L	0.30		0.95
32102	CARBON TETRACHLORIDE	0.0	ug/L	0.50		1.6
34301	CHLOROBENZENE	0.0	ug/L	0.25		0.80
34311	CHLOROETHANE	0.0	ug/L	0.50		1.6
32106	CHLOROFORM	0.0	ug/L	0.25		0.80
34418	CHLOROMETHANE	0.0	ug/L	1.0		3.2
32105	DIBROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
77596	DIBROMOMETHANE	0.0	ug/L	0.50		1.6
34668	DICHLORODIFLUOROMETHANE	0.0	ug/L	0.50		1.6
81577	DIISOPROPYL ETHER	0.0	ug/L	0.25		0.80
34371	ETHYLBENZENE	0.0	ug/L	0.20		0.64
34391	HEXACHLOROBUTADIENE	0.0	ug/L	0.50		1.6
81590	HEXANE, MIXTURE OF ISOMERS	0.0	ug/L	0.50		1.6
77223	ISOPROPYLBENZENE	0.0	ug/L	0.20		0.64

Code	Description	Result	Units	LOD	Report Limit	LOQ
85795	**M/P-XYLENE**	**0.0**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**0.0**	ug/L	3.0		9.5
	Comment: The relative percent difference for the matrix spike and matrix spike duplicate does not meet the QC limit.					
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**0.0**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**0.0**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**0.0**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**0.0**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**0.0**	ug/L	0.30		0.95
77135	**O-XYLENE**	**0.0**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**0.0**	ug/L	0.20		0.64
77128	**STYRENE**	**0.0**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**0.0**	ug/L	2.0		6.4
34010	**TOLUENE**	**0.0**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**0.0**	ug/L	0.20		0.64
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**LARRY SONNENBURG**	*Sample #:*	**360201002**
Collection Start:	**12/19/2017 05:50 pm**	*Collection End:*	**12/19/2017 06:16 pm**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**BASEMENT TAP**
County:	**Manitowoc**	*Account #:*	**RR051**
Sample Location:	**2417 ELM ROAD MANITOWOC, WI**		
Sample Description:	**PRIVATE WELL SAMPLE**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**01/02/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:			

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**12/21/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**0.0**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**0.0**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**0.0**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**0.0**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**0.0**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	1,3,5-TRIMETHYLBENZENE	0.0	ug/L	0.20		0.64
34566	1,3-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77173	1,3-DICHLOROPROPANE	0.0	ug/L	0.30		0.95
34704	1,3-DICHLOROPROPENE-CIS	0.0	ug/L	0.30		0.95
34699	1,3-DICHLOROPROPENE-TRANS	0.0	ug/L	0.50		1.6
34571	1,4-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77170	2,2-DICHLOROPROPANE	0.0	ug/L	0.50		1.6
77275	2-CHLOROTOLUENE	0.0	ug/L	0.30		0.95
81552	ACETONE	0.0	ug/L	3.0		9.5
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					
34030	BENZENE	0.0	ug/L	0.30		0.95
81555	BROMOBENZENE	0.0	ug/L	0.50		1.6
77297	BROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
32101	BROMODICHLOROMETHANE	0.0	ug/L	0.50		1.6
32104	BROMOFORM	0.0	ug/L	1.0		3.2
34413	BROMOMETHANE	0.0	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
77350	BUTYLBENZENE SEC	0.0	ug/L	0.20		0.64
77353	BUTYLBENZENE TERT	0.0	ug/L	0.50		1.6
77041	CARBON DISULFIDE	0.0	ug/L	0.30		0.95
32102	CARBON TETRACHLORIDE	0.0	ug/L	0.50		1.6
34301	CHLOROBENZENE	0.0	ug/L	0.25		0.80
34311	CHLOROETHANE	0.0	ug/L	0.50		1.6
32106	CHLOROFORM	0.0	ug/L	0.25		0.80
34418	CHLOROMETHANE	0.0	ug/L	1.0		3.2
32105	DIBROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
77596	DIBROMOMETHANE	0.0	ug/L	0.50		1.6
34668	DICHLORODIFLUOROMETHANE	0.0	ug/L	0.50		1.6
81577	DIISOPROPYL ETHER	0.0	ug/L	0.25		0.80
34371	ETHYLBENZENE	0.0	ug/L	0.20		0.64
34391	HEXACHLOROBUTADIENE	0.0	ug/L	0.50		1.6
81590	HEXANE, MIXTURE OF ISOMERS	0.0	ug/L	0.50		1.6
77223	ISOPROPYLBENZENE	0.0	ug/L	0.20		0.64

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
85795	**M/P-XYLENE**	**0.0**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**0.0**	ug/L	3.0		9.5
	Comment: The relative percent difference for the matrix spike and matrix spike duplicate does not meet the QC limit.					
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**0.0**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**0.0**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**0.0**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**0.0**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**0.0**	ug/L	0.30		0.95
77135	**O-XYLENE**	**0.0**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**0.0**	ug/L	0.20		0.64
77128	**STYRENE**	**0.0**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**0.0**	ug/L	2.0		6.4
34010	**TOLUENE**	**0.0**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**0.0**	ug/L	0.20		0.64
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**LEVI WAGNER**	*Sample #:*	**359507001**
Collection Start:	**12/14/2017 08:40 am**	*Collection End:*	**12/14/2017 09:07 am**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**SAMPLE TAP**
County:	**Manitowoc**	*Account #:*	**RR051**
Sample Location:	**2915 SOUTH 26TH STREET MANITOWOC, WI 54220**		
Sample Description:	**PRIVATE WELL WATER SAMPLE FROM SAMPLE TAP**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**01/04/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:			

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**12/21/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**ND**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**ND**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**ND**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**ND**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**ND**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**ND**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**ND**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**ND**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**ND**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**ND**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**ND**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**ND**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**ND**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**ND**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**ND**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**ND**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**ND**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**ND**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	1,3,5-TRIMETHYLBENZENE	ND	ug/L	0.20		0.64
34566	1,3-DICHLOROBENZENE	ND	ug/L	0.25		0.80
77173	1,3-DICHLOROPROPANE	ND	ug/L	0.30		0.95
34704	1,3-DICHLOROPROPENE-CIS	ND	ug/L	0.30		0.95
34699	1,3-DICHLOROPROPENE-TRANS	ND	ug/L	0.50		1.6
34571	1,4-DICHLOROBENZENE	ND	ug/L	0.25		0.80
77170	2,2-DICHLOROPROPANE	ND	ug/L	0.50		1.6
77275	2-CHLOROTOLUENE	ND	ug/L	0.30		0.95
81552	ACETONE	ND	ug/L	3.0		9.5
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					
34030	BENZENE	ND	ug/L	0.30		0.95
81555	BROMOBENZENE	ND	ug/L	0.50		1.6
77297	BROMOCHLOROMETHANE	ND	ug/L	0.50		1.6
32101	BROMODICHLOROMETHANE	ND	ug/L	0.50		1.6
32104	BROMOFORM	ND	ug/L	1.0		3.2
34413	BROMOMETHANE	ND	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
77350	BUTYLBENZENE SEC	ND	ug/L	0.20		0.64
77353	BUTYLBENZENE TERT	ND	ug/L	0.50		1.6
77041	CARBON DISULFIDE	ND	ug/L	0.30		0.95
32102	CARBON TETRACHLORIDE	ND	ug/L	0.50		1.6
34301	CHLOROBENZENE	ND	ug/L	0.25		0.80
34311	CHLOROETHANE	ND	ug/L	0.50		1.6
32106	CHLOROFORM	ND	ug/L	0.25		0.80
34418	CHLOROMETHANE	ND	ug/L	1.0		3.2
32105	DIBROMOCHLOROMETHANE	ND	ug/L	0.50		1.6
77596	DIBROMOMETHANE	ND	ug/L	0.50		1.6
34668	DICHLORODIFLUOROMETHANE	ND	ug/L	0.50		1.6
81577	DIISOPROPYL ETHER	ND	ug/L	0.25		0.80
34371	ETHYLBENZENE	ND	ug/L	0.20		0.64
34391	HEXACHLOROBUTADIENE	ND	ug/L	0.50		1.6
81590	HEXANE, MIXTURE OF ISOMERS	ND	ug/L	0.50		1.6
77223	ISOPROPYLBENZENE	ND	ug/L	0.20		0.64

Code	Description	Result	Units	LOD	Report Limit	LOQ
85795	**M/P-XYLENE**	**ND**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**ND**	ug/L	3.0		9.5
	Comment: The relative percent difference for the matrix spike and matrix spike duplicate does not meet the QC limit.					
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**ND**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**ND**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**ND**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**ND**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**ND**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**ND**	ug/L	0.30		0.95
77135	**O-XYLENE**	**ND**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**ND**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**ND**	ug/L	0.20		0.64
77128	**STYRENE**	**ND**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**ND**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**ND**	ug/L	2.0		6.4
34010	**TOLUENE**	**ND**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**ND**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**ND**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**ND**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**ND**	ug/L	0.20		0.64
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**MICHAEL A SIERACKI (**	*Sample #:*	**360201006**
Collection Start:	**12/19/2017 03:49 pm**	*Collection End:*	**12/19/2017 04:15 pm**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**TAP BASEMENT**
County:		*Account #:*	**RR051**
Sample Location:	**2408 ELM ROAD MANITOWOC, WI 54220**		
Sample Description:	**PRIVATE WELL**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**01/02/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:	Trip Blank broken upon reciept		

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**12/21/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**0.0**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**0.0**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**0.0**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**0.0**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**0.0**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	1,3,5-TRIMETHYLBENZENE	0.0	ug/L	0.20		0.64
34566	1,3-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77173	1,3-DICHLOROPROPANE	0.0	ug/L	0.30		0.95
34704	1,3-DICHLOROPROPENE-CIS	0.0	ug/L	0.30		0.95
34699	1,3-DICHLOROPROPENE-TRANS	0.0	ug/L	0.50		1.6
34571	1,4-DICHLOROBENZENE	0.0	ug/L	0.25		0.80
77170	2,2-DICHLOROPROPANE	0.0	ug/L	0.50		1.6
77275	2-CHLOROTOLUENE	0.0	ug/L	0.30		0.95
81552	ACETONE	0.0	ug/L	3.0		9.5
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					
34030	BENZENE	0.0	ug/L	0.30		0.95
81555	BROMOBENZENE	0.0	ug/L	0.50		1.6
77297	BROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
32101	BROMODICHLOROMETHANE	0.0	ug/L	0.50		1.6
32104	BROMOFORM	0.0	ug/L	1.0		3.2
34413	BROMOMETHANE	0.0	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
77350	BUTYLBENZENE SEC	0.0	ug/L	0.20		0.64
77353	BUTYLBENZENE TERT	0.0	ug/L	0.50		1.6
77041	CARBON DISULFIDE	0.0	ug/L	0.30		0.95
32102	CARBON TETRACHLORIDE	0.0	ug/L	0.50		1.6
34301	CHLOROBENZENE	0.0	ug/L	0.25		0.80
34311	CHLOROETHANE	0.0	ug/L	0.50		1.6
32106	CHLOROFORM	0.0	ug/L	0.25		0.80
34418	CHLOROMETHANE	0.0	ug/L	1.0		3.2
32105	DIBROMOCHLOROMETHANE	0.0	ug/L	0.50		1.6
77596	DIBROMOMETHANE	0.0	ug/L	0.50		1.6
34668	DICHLORODIFLUOROMETHANE	0.0	ug/L	0.50		1.6
81577	DIISOPROPYL ETHER	0.0	ug/L	0.25		0.80
34371	ETHYLBENZENE	0.0	ug/L	0.20		0.64
34391	HEXACHLOROBUTADIENE	0.0	ug/L	0.50		1.6
81590	HEXANE, MIXTURE OF ISOMERS	0.0	ug/L	0.50		1.6
77223	ISOPROPYLBENZENE	0.0	ug/L	0.20		0.64

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
85795	**M/P-XYLENE**	**0.0**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**0.0**	ug/L	3.0		9.5
	Comment: The relative percent difference for the matrix spike and matrix spike duplicate does not meet the QC limit.					
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**0.0**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**0.0**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**0.0**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**0.0**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**0.0**	ug/L	0.30		0.95
77135	**O-XYLENE**	**0.0**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**0.0**	ug/L	0.20		0.64
77128	**STYRENE**	**0.0**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**0.0**	ug/L	2.0		6.4
34010	**TOLUENE**	**0.0**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**0.0**	ug/L	0.20		0.64
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**ROBERT LOVE**	*Sample #:*	**360201003**
Collection Start:	**12/19/2017 05:14 pm**	*Collection End:*	**12/19/2017 05:41 pm**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**BASEMENT TAP**
County:	**Manitowoc**	*Account #:*	**RR051**
Sample Location:	**2201 ELM ROAD MANITOWOC, WI**		
Sample Description:	**PRIVATE WELL SAMPLE**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**01/02/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:			

Analyses and Results:

Analysis Method	*Analysis Date*	*Lab Comment*
EPA 8260B in Water	**12/21/2017**	

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34506	**1,1,1-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34516	**1,1,2,2-TETRACHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34511	**1,1,2-TRICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
34496	**1,1-DICHLOROETHANE**	**0.0**	ug/L	0.30		0.95
34501	**1,1-DICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
77168	**1,1-DICHLOROPROPENE**	**0.0**	ug/L	0.50		1.6
77613	**1,2,3-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77443	**1,2,3-TRICHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
34551	**1,2,4-TRICHLOROBENZENE**	**0.0**	ug/L	0.50		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**0.0**	ug/L	1.0		3.2
77651	**1,2-DIBROMOETHANE**	**0.0**	ug/L	0.50		1.6
34536	**1,2-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34531	**1,2-DICHLOROETHANE**	**0.0**	ug/L	0.50		1.6
77093	**1,2-DICHLOROETHYLENE CIS**	**0.51**	ug/L	0.30		0.95
34546	**1,2-DICHLOROETHYLENE TRANS**	**0.0**	ug/L	0.50		1.6
34541	**1,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	**1,3,5-TRIMETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
34566	**1,3-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
77173	**1,3-DICHLOROPROPANE**	**0.0**	ug/L	0.30		0.95
34704	**1,3-DICHLOROPROPENE-CIS**	**0.0**	ug/L	0.30		0.95
34699	**1,3-DICHLOROPROPENE-TRANS**	**0.0**	ug/L	0.50		1.6
34571	**1,4-DICHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
77170	**2,2-DICHLOROPROPANE**	**0.0**	ug/L	0.50		1.6
77275	**2-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
81552	**ACETONE**	**0.0**	ug/L	3.0		9.5
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					
34030	**BENZENE**	**0.0**	ug/L	0.30		0.95
81555	**BROMOBENZENE**	**0.0**	ug/L	0.50		1.6
77297	**BROMOCHLOROMETHANE**	**0.0**	ug/L	0.50		1.6
32101	**BROMODICHLOROMETHANE**	**0.0**	ug/L	0.50		1.6
32104	**BROMOFORM**	**0.0**	ug/L	1.0		3.2
34413	**BROMOMETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
77350	**BUTYLBENZENE SEC**	**0.0**	ug/L	0.20		0.64
77353	**BUTYLBENZENE TERT**	**0.0**	ug/L	0.50		1.6
77041	**CARBON DISULFIDE**	**0.0**	ug/L	0.30		0.95
32102	**CARBON TETRACHLORIDE**	**0.0**	ug/L	0.50		1.6
34301	**CHLOROBENZENE**	**0.0**	ug/L	0.25		0.80
34311	**CHLOROETHANE**	**0.0**	ug/L	0.50		1.6
32106	**CHLOROFORM**	**0.0**	ug/L	0.25		0.80
34418	**CHLOROMETHANE**	**0.0**	ug/L	1.0		3.2
32105	**DIBROMOCHLOROMETHANE**	**0.0**	ug/L	0.50		1.6
77596	**DIBROMOMETHANE**	**0.0**	ug/L	0.50		1.6
34668	**DICHLORODIFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
81577	**DIISOPROPYL ETHER**	**0.0**	ug/L	0.25		0.80
34371	**ETHYLBENZENE**	**0.0**	ug/L	0.20		0.64
34391	**HEXACHLOROBUTADIENE**	**0.0**	ug/L	0.50		1.6
81590	**HEXANE, MIXTURE OF ISOMERS**	**0.0**	ug/L	0.50		1.6
77223	**ISOPROPYLBENZENE**	**0.0**	ug/L	0.20		0.64

Code	Description	Result	Units	LOD	Report Limit	LOQ
85795	**M/P-XYLENE**	**0.0**	ug/L	0.40		1.3
81595	**METHYL ETHYL KETONE**	**0.0**	ug/L	3.0		9.5
	Comment: The relative percent difference for the matrix spike and matrix spike duplicate does not meet the QC limit.					
78133	**METHYL ISOBUTYL KETONE (MIBK)**	**0.0**	ug/L	2.0		6.4
78032	**METHYL TERT BUTYL ETHER**	**0.0**	ug/L	0.30		0.95
34423	**METHYLENE CHLORIDE**	**0.0**	ug/L	0.50		1.6
77342	**N-BUTYLBENZENE**	**0.0**	ug/L	0.20		0.64
77224	**N-PROPYLBENZENE**	**0.0**	ug/L	0.20		0.64
34696	**NAPHTHALENE**	**0.0**	ug/L	0.30		0.95
77135	**O-XYLENE**	**0.0**	ug/L	0.30		0.95
77277	**P-CHLOROTOLUENE**	**0.0**	ug/L	0.30		0.95
77356	**P-ISOPROPYLTOLUENE**	**0.0**	ug/L	0.20		0.64
77128	**STYRENE**	**0.0**	ug/L	0.25		0.80
34475	**TETRACHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
81607	**TETRAHYDROFURAN**	**0.0**	ug/L	2.0		6.4
34010	**TOLUENE**	**0.0**	ug/L	0.25		0.80
39180	**TRICHLOROETHYLENE**	**0.0**	ug/L	0.50		1.6
34488	**TRICHLOROFLUOROMETHANE**	**0.0**	ug/L	0.50		1.6
81611	**TRICHLOROTRIFLUOROETHANE**	**0.0**	ug/L	0.50		1.6
	Comment: The matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded. | The lab matrix spike does not meet the upper QC limit.					
39175	**VINYL CHLORIDE**	**0.0**	ug/L	0.20		0.64
	Comment: The lab matrix spike does not meet the upper QC limit. | The Upper QC limit for the calibration check is exceeded.					

Wisconsin Department of Natural Resources
Laboratory Report

Laboratory: **Wisconsin State Laboratory of Hygiene** *DNR ID* **113133790**
2601 Agriculture Dr
Madison **WI** **53718**
Phone : **800-442-4618** *Fax Phone :* **608-224-6213**

Sample:

Field #:	**ROBERT LOVE WUWN:OB1**	*Sample #:*	**367180001**
Collection Start:	**02/14/2018 05:50 pm**	*Collection End:*	**02/14/2018 05:25 pm**
Collected by:	**JIM KASDORF**	*Waterbody/Outfall Id:*	
ID #:		*ID Point #:*	**BASEMENT TAP**
County:	**Manitowoc**	*Account #:*	**RR051**
Sample Location:	**2201 ELM ROAD MANITOWOC, WI**		
Sample Description:	**PRIVATE WELL SAMPLE**		
Sample Source:	**Private (other)**	*Sample Depth:*	
Date Reported:	**02/24/2018**	*Sample Status:*	**COMPLETE**
Project No:		*Sample Reason:*	
Comment:			

Analyses and Results:

Analysis Method *Analysis Date* *Lab Comment*

EPA 8260B in Water **02/16/2018**

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
77562	**1,1,1,2-TETRACHLOROETHANE**	**ND**	ug/L	0.37		1.2
34506	**1,1,1-TRICHLOROETHANE**	**ND**	ug/L	0.20		0.67
34516	**1,1,2,2-TETRACHLOROETHANE**	**ND**	ug/L	0.36		1.2
34511	**1,1,2-TRICHLOROETHANE**	**ND**	ug/L	0.48		1.6
34496	**1,1-DICHLOROETHANE**	**ND**	ug/L	0.30		1.0
34501	**1,1-DICHLOROETHYLENE**	**ND**	ug/L	0.22		0.73
77168	**1,1-DICHLOROPROPENE**	**ND**	ug/L	0.19		0.63
77613	**1,2,3-TRICHLOROBENZENE**	**ND**	ug/L	0.33		1.1
77443	**1,2,3-TRICHLOROPROPANE**	**ND**	ug/L	0.36		1.2
34551	**1,2,4-TRICHLOROBENZENE**	**ND**	ug/L	0.47		1.6
77222	**1,2,4-TRIMETHYLBENZENE**	**ND**	ug/L	0.20		0.67
38437	**1,2-DIBROMO-3-CHLOROPROPANE**	**ND**	ug/L	0.40		1.3
77651	**1,2-DIBROMOETHANE**	**ND**	ug/L	0.39		1.3
34536	**1,2-DICHLOROBENZENE**	**ND**	ug/L	0.12		0.40
34531	**1,2-DICHLOROETHANE**	**ND**	ug/L	0.16		0.53
77093	**1,2-DICHLOROETHYLENE CIS**	**0.55**	ug/L	0.16		0.53
34546	**1,2-DICHLOROETHYLENE TRANS**	**ND**	ug/L	0.22		0.73
34541	**1,2-DICHLOROPROPANE**	**ND**	ug/L	0.30		1.0

Code	Description	Result	Units	LOD	Report Limit	LOQ
77226	**1,3,5-TRIMETHYLBENZENE**	**ND**	ug/L	0.26		0.87
34566	**1,3-DICHLOROBENZENE**	**ND**	ug/L	0.11		0.37
77173	**1,3-DICHLOROPROPANE**	**ND**	ug/L	0.29		0.97
34704	**1,3-DICHLOROPROPENE-CIS**	**ND**	ug/L	0.14		0.47
34699	**1,3-DICHLOROPROPENE-TRANS**	**ND**	ug/L	0.30		1.0
34571	**1,4-DICHLOROBENZENE**	**ND**	ug/L	0.11		0.37
77170	**2,2-DICHLOROPROPANE**	**ND**	ug/L	1.0		3.3
77275	**2-CHLOROTOLUENE**	**ND**	ug/L	0.29		0.97
81552	**ACETONE**	**ND**	ug/L	2.0		6.7
34030	**BENZENE**	**ND**	ug/L	0.10		0.33
81555	**BROMOBENZENE**	**ND**	ug/L	0.29		0.97
77297	**BROMOCHLOROMETHANE**	**ND**	ug/L	0.30		1.0
32101	**BROMODICHLOROMETHANE**	**ND**	ug/L	0.17		0.57
32104	**BROMOFORM**	**ND**	ug/L	1.0		3.3
34413	**BROMOMETHANE**	**ND**	ug/L	0.31		1.0
77350	**BUTYLBENZENE SEC**	**ND**	ug/L	0.20		0.67
77353	**BUTYLBENZENE TERT**	**ND**	ug/L	0.42		1.4
77041	**CARBON DISULFIDE**	**ND**	ug/L	1.0		3.3
32102	**CARBON TETRACHLORIDE**	**ND**	ug/L	0.21		0.70
34301	**CHLOROBENZENE**	**ND**	ug/L	0.27		0.90
34311	**CHLOROETHANE**	**ND**	ug/L	0.30		1.0
32106	**CHLOROFORM**	**ND**	ug/L	0.10		0.33
34418	**CHLOROMETHANE**	**ND**	ug/L	0.89		3.0
32105	**DIBROMOCHLOROMETHANE**	**ND**	ug/L	0.26		0.87
77596	**DIBROMOMETHANE**	**ND**	ug/L	0.23		0.77
34668	**DICHLORODIFLUOROMETHANE**	**ND**	ug/L	0.50		1.7
81577	**DIISOPROPYL ETHER**	**ND**	ug/L	0.21		0.70
34371	**ETHYLBENZENE**	**ND**	ug/L	0.30		1.0
34391	**HEXACHLOROBUTADIENE**	**ND**	ug/L	0.30		1.0
81590	**HEXANE, MIXTURE OF ISOMERS**	**ND**	ug/L	0.73		2.4
77223	**ISOPROPYLBENZENE**	**ND**	ug/L	0.31		1.0
85795	**M/P-XYLENE**	**ND**	ug/L	0.56		1.9
81595	**METHYL ETHYL KETONE**	**ND**	ug/L	2.0		6.7
78133	**METHYL ISOBUTYL KETONE**	**ND**	ug/L	1.3		4.3

Code	*Description*	*Result*	*Units*	*LOD*	*Report Limit*	*LOQ*
	(MIBK)					
78032	**METHYL TERT BUTYL ETHER**	**ND**	ug/L	0.24		0.80
34423	**METHYLENE CHLORIDE**	**ND**	ug/L	0.15		0.50
77342	**N-BUTYLBENZENE**	**ND**	ug/L	0.58		1.9
77224	**N-PROPYLBENZENE**	**ND**	ug/L	0.26		0.87
34696	**NAPHTHALENE**	**ND**	ug/L	0.32		1.1
77135	**O-XYLENE**	**ND**	ug/L	0.33		1.1
77277	**P-CHLOROTOLUENE**	**ND**	ug/L	0.32		1.1
77356	**P-ISOPROPYLTOLUENE**	**ND**	ug/L	0.20		0.67
77128	**STYRENE**	**ND**	ug/L	0.27		0.90
34475	**TETRACHLOROETHYLENE**	**ND**	ug/L	0.29		0.97
81607	**TETRAHYDROFURAN**	**ND**	ug/L	1.4		4.7
34010	**TOLUENE**	**ND**	ug/L	0.29		0.97
39180	**TRICHLOROETHYLENE**	**ND**	ug/L	0.16		0.53
34488	**TRICHLOROFLUOROMETHANE**	**ND**	ug/L	0.24		0.80
81611	**TRICHLOROTRIFLUOROETHANE**	**ND**	ug/L	0.72		2.4
39175	**VINYL CHLORIDE**	**0.20**	ug/L	0.17		0.57

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 *19-Mar-18*

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34308
Project # 60135471.34

Lab Code 5034308A
Sample ID 2918 26TH RAW
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	1.7	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	2980	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Lab Code 5034308B
Sample ID 2918 26TH TAP
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	0.15	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	2980	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34308
Project # 60135471.34

Lab Code 5034308C
Sample ID 2918 26TH RO
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	0.05 "J"	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	180	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Lab Code 5034308D
Sample ID 4005 THUNDER RA
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	0.73	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	2700	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Lab Code 5034308E
Sample ID 4005 THUNDER TA
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	0.06 "J"	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	2800	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34308
Project # 60135471.34

Lab Code 5034308F
Sample ID 4005 THUNDER RO
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	0.05 "J"	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	56	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Lab Code 5034308G
Sample ID 4010 THUNDER TA
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	0.06 "J"	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	2630	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Lab Code 5034308H
Sample ID 4010 THUNDER RO
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	0.05 "J"	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	224	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34308
Project # 60135471.34

Lab Code 5034308I
Sample ID 4010 THUNDER RA
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Ferrous Iron	1.6	mg/l	0.03	0.1	1	SM3111B		3/16/2018	BLE	1
Iron, Total	see attched	mg/l	0.003	0.008	1	200.7		3/13/2018	CWT	1
Wet Chemistry										
General										
Hardness, Total Unfiltered	see attched	mg/l	0.2	0.67	1	200.7		3/15/2018	CWT	1
Solids, Total Dissolved	2630	mg/l	20	20	1	2540c		3/8/2018	BLE	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34308
Project # 60135471.34

Lab Code 5034308J
Sample ID 2918 26TH RAW VO
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		3/9/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		3/9/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		3/9/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		3/9/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		3/9/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		3/9/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		3/9/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/9/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		3/9/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		3/9/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		3/9/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		3/9/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		3/9/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/9/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		3/9/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		3/9/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		3/9/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		3/9/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		3/9/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		3/9/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		3/9/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		3/9/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		3/9/2018	CJR	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.16	1	8260B		3/9/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		3/9/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		3/9/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		3/9/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		3/9/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		3/9/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		3/9/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		3/9/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		3/9/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		3/9/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		3/9/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		3/9/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/9/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		3/9/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		3/9/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		3/9/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		3/9/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		3/9/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		3/9/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		3/9/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		3/9/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		3/9/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		3/9/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		3/9/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		3/9/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		3/9/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		3/9/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34308
Project # 60135471.34

Lab Code 5034308J
Sample ID 2918 26TH RAW VO
Sample Matrix Water
Sample Date 3/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		3/9/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/9/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		3/9/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		3/9/2018	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		3/9/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	98	REC %			1	8260B		3/9/2018	CJR	1
SUR - 4-Bromofluorobenzene	92	REC %			1	8260B		3/9/2018	CJR	1
SUR - Dibromofluoromethane	102	REC %			1	8260B		3/9/2018	CJR	1

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

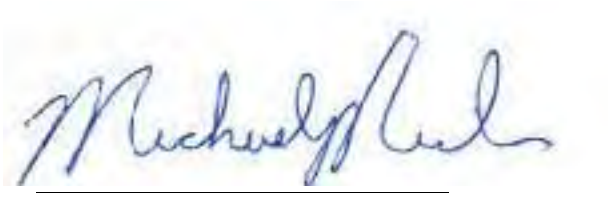
Code	*Comment*
1	Laboratory QC within limits.

BLE denotes sub contract lab - Certification #445023150

CWT denotes sub contract lab - Certification #445126660

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



Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308A
Well ID/Address
Well City
Sample Location
Lab # 460577
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**1853**	mg/l	1.85	6.15	5		3/15/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**7.9**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**280**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**544**	mg/l	0.25	0.75	5	3/14/2018	3/15/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**4.8**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**2.17**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**None Detected**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**119**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**19.9**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**12.1**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**4.94**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308A
Well ID/Address
Well City
Sample Location
Lab # 460577
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**3110**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**123**	mg/l	0.19	0.62	1	3/12/2018	3/13/2018	200.7	NMP	1
Strontium	**30600**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**9.09**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**8.9**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hanten

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308B
Well ID/Address
Well City
Sample Location
Lab # 460578
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**42.7**	mg/l	0.37	1.23	1		3/15/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**None Detected**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**295**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**13.9**	mg/l	0.05	0.15	1	3/12/2018	3/13/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**None Detected**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**0.18**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**93.7**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**1.93**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**None Detected**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**1.9**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**2.46**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308B
Well ID/Address
Well City
Sample Location
Lab # 460578
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**3260**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**1110**	mg/l	1.9	6.2	10	3/14/2018	3/16/2018	200.7	NMP	1
Strontium	**1040**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**None Detected**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**13.2**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hanten

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308C
Well ID/Address
Well City
Sample Location
Lab # 460579
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**41.3**	mg/l	0.37	1.23	1	3/12/2018	3/13/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**13.1**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**232**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**12.1**	mg/l	0.05	0.15	1	3/12/2018	3/13/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**None Detected**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**0.04**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**None Detected**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**2.69**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**6.3**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**None Detected**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**0.76**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308C
Well ID/Address
Well City
Sample Location
Lab # 460579
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**1780**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**57.6**	mg/l	0.19	0.62	1	3/12/2018	3/13/2018	200.7	NMP	1
Strontium	**495**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**None Detected**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**10.5**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hanten

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308D
Well ID/Address
Well City
Sample Location
Lab # 460580
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**1860**	mg/l	1.85	6.15	5		3/15/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**7.3**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**317**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**552**	mg/l	0.25	0.75	5	3/14/2018	3/15/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**5.9**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**4.83**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**None Detected**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**113**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**30.0**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**11.9**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**3.67**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308D
Well ID/Address
Well City
Sample Location
Lab # 460580
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**4240**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**43.5**	mg/l	0.19	0.62	1	3/12/2018	3/13/2018	200.7	NMP	1
Strontium	**29000**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**9.0**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**None Detected**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hunter

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308E
Well ID/Address
Well City
Sample Location
Lab # 460581
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**61.9**	mg/l	0.37	1.23	1	3/12/2018	3/13/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**None Detected**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**386**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**19.4**	mg/l	0.05	0.15	1	3/12/2018	3/13/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**23.5**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**0.06**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**6.9**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**3.28**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**None Detected**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**2.6**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**326**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308E
Well ID/Address
Well City
Sample Location
Lab # 460581
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**4520**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**788**	mg/l	0.95	3.1	5	3/14/2018	3/16/2018	200.7	NMP	1
Strontium	**1320**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**None Detected**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**22.8**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hanten

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308F
Well ID/Address
Well City
Sample Location
Lab # 460582
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**0.81**	mg/l	0.37	1.23	1	3/12/2018	3/13/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**1.9**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**284**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**0.26**	mg/l	0.05	0.15	1	3/12/2018	3/13/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**None Detected**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**0.06**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**None Detected**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**None Detected**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**None Detected**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**4.4**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**7.67**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**3.1**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308F
Well ID/Address
Well City
Sample Location
Lab # 460582
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**283**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**8.79**	mg/l	0.19	0.62	1	3/12/2018	3/13/2018	200.7	NMP	1
Strontium	**9.66**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**None Detected**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**10.9**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection | None Detected = Result was less than the LOD | LOQ Limit of Quantitation

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

Laboratory Director Michael Hunter

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308G
Well ID/Address
Well City
Sample Location
Lab # 460583
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**77.2**	mg/l	0.37	1.23	1	3/12/2018	3/13/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**None Detected**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**268**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**24.6**	mg/l	0.05	0.15	1	3/12/2018	3/13/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**51.4**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**0.05**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**49.1**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**3.84**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**None Detected**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**3.2**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**2.4**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308G
Well ID/Address
Well City
Sample Location
Lab # 460583
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**4950**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**959**	mg/l	0.95	3.1	5	3/14/2018	3/16/2018	200.7	NMP	1
Strontium	**1600**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**None Detected**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**28.6**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hanta

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308H
Well ID/Address
Well City
Sample Location
Lab # 460584
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**20.1**	mg/l	0.37	1.23	1	3/12/2018	3/13/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**None Detected**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**234**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**5.04**	mg/l	0.05	0.15	1	3/12/2018	3/13/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**None Detected**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**None Detected**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**None Detected**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**1.83**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**None Detected**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**None Detected**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**0.53**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308H
Well ID/Address
Well City
Sample Location
Lab # 460584
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**1350**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**76.3**	mg/l	0.19	0.62	1	3/12/2018	3/13/2018	200.7	NMP	1
Strontium	**207**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**None Detected**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**None Detected**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hanta

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 50343081
Well ID/Address
Well City
Sample Location
Lab # 460585
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
General										
Wet Chemistry										
Hardness	**1888**	mg/l	1.85	6.15	5		3/15/2018	200.7	NMP	1
Inorganic										
Metals										
Aluminum	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Barium	**9.8**	ug/L	1.7	5.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Beryllium	**None Detected**	ug/l	0.2	0.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Boron	**262**	ug/l	64	213	1	3/12/2018	3/13/2018	200.7	NMP	1
Cadmium	**None Detected**	ug/L	0.4	1.3	1	3/12/2018	3/13/2018	200.7	NMP	1
Calcium	**558**	mg/l	0.25	0.75	5	3/14/2018	3/15/2018	200.7	NMP	1
Chromium	**None Detected**	ug/L	3.9	12.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Cobalt	**None Detected**	ug/l	2.3	7.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Copper - ICP	**5.3**	ug/L	3.1	10	1	3/12/2018	3/13/2018	200.7	NMP	1
Iron	**4.82**	mg/l	0.03	0.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Lithium	**None Detected**	ug/l	5.9	19.5	1	3/12/2018	3/13/2018	200.7	NMP	1
Magnesium	**113**	mg/l	0.06	0.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Manganese	**32.8**	ug/L	4.2	13.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Molybdenum	**10.9**	ug/L	1.9	6.2	1	3/12/2018	3/13/2018	200.7	NMP	1
Nickel	**None Detected**	ug/L	3.4	11.4	1	3/12/2018	3/13/2018	200.7	NMP	1
Phosphorus, Total	**None Detected**	ug/l	7.2	24.1	1	3/12/2018	3/13/2018	200.7	NMP	1
Potassium	**4.52**	mg/L	0.09	0.29	1	3/12/2018	3/13/2018	200.7	NMP	1

Clean Water Testing

1990 Prospect Ct., Appleton, WI 54914 * 800-801-7590

MIKE RICKER
SYNERGY
1990 PROSPECT CT
APPLETON, WI 54914

Home Owner 5034308I
Well ID/Address
Well City
Sample Location
Lab # 460585
Collected By/Date

Report Date *19-Mar-18*

Analyte	Result	Units	LOD	LOQ	Dil	Dig Date	Run Date	Mthd	Analyst	QC Code
Silicon	**4890**	ug/l	11.9	39.6	1	3/12/2018	3/13/2018	200.7	NMP	1
Silver	**None Detected**	ug/L	8.4	28	1	3/12/2018	3/13/2018	200.7	NMP	1
Sodium	**68.4**	mg/l	0.19	0.62	1	3/12/2018	3/13/2018	200.7	NMP	1
Strontium	**28200**	ug/l	3.2	10.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Vanadium	**10.2**	ug/l	5.6	18.8	1	3/12/2018	3/13/2018	200.7	NMP	1
Zinc	**25.2**	ug/l	7	23.2	1	3/12/2018	3/13/2018	200.7	NMP	1

LOD Limit of Detection None Detected = Result was less than the LOD LOQ Limit of Quantitation

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

Laboratory Director Michael Hanta

CHAIN OF 'STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 337[illegible]5

Page 1 of ____

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
____ Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #: 60135471.34

Sampler: (signature) Sarah E Krueger

Project (Name / Location): FORMER NEWTON GRAVEL PIT/MANITOWOC WI

Reports To: DAVE HENDERSON	Invoice To: SEE LEFT
Company AECOM	Company
Address 1555 NORTH RIVER CENTER SUITE 214	Address
City State Zip MILWAUKEE WI 53212	City State Zip
Phone (414) 944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	8-RCRA METALS	ICP METALS	Fe (TOTAL)	Fe 2+	Hardness	TDS				PID/ FID
5034308 A	29182KTH RAW	3/5/18	1330		X	N	3																	X	X	X	X	X				
B	29182KTH TAP		1325		X	N	3																	X	X	X	X	X				
C	29182KTH RO		1320		X	N	3																	X	X	X	X	X				
D	4005 Thunder RAW		1350		X	N	3																	X	X	X	X	X				
E	4005 Thunder TAP		1355		X	N	3																	X	X	X	X	X				
F	4005 Thunder RO		1400		X	N	3																	X	X	X	X	X				
G	4010 Thunder TAP		1420		X	N	3																	X	X	X	X	X				
H	4010 Thunder RO		1425		X	N	3																	X	X	X	X	X				
I	4010 Thunder RAW		1430		X	N	3																	X	X	X	X	X				
J	29182KTH RAW VOC		1505		X	N	2																X									

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

ANALYSIS PER CONTRACT

Sample Integrity - To be completed by receiving lab.

Method of Shipment: SPL

Temp. of Temp. Blank ____ °C On Ice: X

Cooler seal intact upon receipt: ✓ Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Sarah E Krueger	0815	3/6/18			

Received in Laboratory By: [signature] Time: 8:45 AM Date: 3-6-18

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 *30-May-18*

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677A
Sample ID 4027 THUNDER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/25/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/25/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/25/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/25/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/25/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/25/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/25/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/25/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/25/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/25/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/25/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/25/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/25/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/25/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/25/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/25/2018	CJR	1
cis-1,2-Dichloroethene	1.32	ug/l	0.37	1.16	1	8260B		5/25/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/25/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/25/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/25/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677A
Sample ID 4027 THUNDER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/25/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/25/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/25/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/25/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/25/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/25/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/25/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/25/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/25/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/25/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/25/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/25/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/25/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/25/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/25/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/25/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/25/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/25/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/25/2018	CJR	1
Vinyl Chloride	0.28 "J"	ug/l	0.2	0.65	1	8260B		5/25/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/25/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/25/2018	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		5/25/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		5/25/2018	CJR	1
SUR - 4-Bromofluorobenzene	96	REC %			1	8260B		5/25/2018	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677B
Sample ID 3618 CTH CR
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/25/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/25/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/25/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/25/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/25/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/25/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/25/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/25/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/25/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/25/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/25/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/25/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/25/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/25/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/25/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/25/2018	CJR	1
cis-1,2-Dichloroethene	1.23	ug/l	0.37	1.16	1	8260B		5/25/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/25/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/25/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/25/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/25/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/25/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/25/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/25/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/25/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/25/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/25/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/25/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/25/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/25/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/25/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/25/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/25/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/25/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/25/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/25/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/25/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/25/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677B
Sample ID 3618 CTH CR
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/25/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/25/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/25/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/25/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		5/25/2018	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			1	8260B		5/25/2018	CJR	1
SUR - Dibromofluoromethane	94	REC %			1	8260B		5/25/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677C
Sample ID 3921 BLACKHAWK
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/25/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/25/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/25/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/25/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/25/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/25/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/25/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/25/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/25/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/25/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/25/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/25/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/25/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/25/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/25/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/25/2018	CJR	1
cis-1,2-Dichloroethene	0.95 "J"	ug/l	0.37	1.16	1	8260B		5/25/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/25/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/25/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/25/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/25/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/25/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/25/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/25/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/25/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/25/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/25/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/25/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/25/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/25/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/25/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/25/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/25/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/25/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/25/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/25/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/25/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/25/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677C
Sample ID 3921 BLACKHAWK
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/25/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/25/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/25/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/25/2018	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		5/25/2018	CJR	1
SUR - Dibromofluoromethane	96	REC %			1	8260B		5/25/2018	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1	8260B		5/25/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677D
Sample ID 3911 BLACKHAWK
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/25/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/25/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/25/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/25/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/25/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/25/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/25/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/25/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/25/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/25/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/25/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/25/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/25/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/25/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/25/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/25/2018	CJR	1
cis-1,2-Dichloroethene	0.58 "J"	ug/l	0.37	1.16	1	8260B		5/25/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/25/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/25/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/25/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/25/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/25/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/25/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/25/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/25/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/25/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/25/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/25/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/25/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/25/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/25/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/25/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/25/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/25/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/25/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/25/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/25/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/25/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677D
Sample ID 3911 BLACKHAWK
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/25/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/25/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/25/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/25/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		5/25/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	95	REC %			1	8260B		5/25/2018	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		5/25/2018	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677E
Sample ID 3327 HECKER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/25/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/25/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/25/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/25/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/25/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/25/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/25/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/25/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/25/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/25/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/25/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/25/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/25/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/25/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/25/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/25/2018	CJR	1
cis-1,2-Dichloroethene	4.5	ug/l	0.37	1.16	1	8260B		5/25/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/25/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/25/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/25/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/25/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/25/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/25/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/25/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/25/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/25/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/25/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/25/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/25/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/25/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/25/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/25/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/25/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/25/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/25/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/25/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/25/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/25/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677E
Sample ID 3327 HECKER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/25/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/25/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/25/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/25/2018	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		5/25/2018	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		5/25/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		5/25/2018	CJR	1
SUR - 4-Bromofluorobenzene	96	REC %			1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677F
Sample ID 3702 HECKER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/25/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/25/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/25/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/25/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/25/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/25/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/25/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/25/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/25/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/25/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/25/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/25/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/25/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/25/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/25/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/25/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/25/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/25/2018	CJR	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.16	1	8260B		5/25/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/25/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/25/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/25/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/25/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/25/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/25/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/25/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/25/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/25/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/25/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/25/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/25/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/25/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/25/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/25/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/25/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/25/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/25/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/25/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/25/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/25/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/25/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/25/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/25/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677F
Sample ID 3702 HECKER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/25/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/25/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/25/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/25/2018	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		5/25/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		5/25/2018	CJR	1
SUR - 4-Bromofluorobenzene	99	REC %			1	8260B		5/25/2018	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		5/25/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677G
Sample ID 3327 HECKER DUP
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/26/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/26/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/26/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/26/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/26/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/26/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/26/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/26/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/26/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/26/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/26/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/26/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/26/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/26/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/26/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/26/2018	CJR	1
cis-1,2-Dichloroethene	4.2	ug/l	0.37	1.16	1	8260B		5/26/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/26/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/26/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/26/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/26/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/26/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/26/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/26/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/26/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/26/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/26/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/26/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/26/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/26/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/26/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/26/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/26/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/26/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/26/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/26/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/26/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/26/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677G
Sample ID 3327 HECKER DUP
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/26/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/26/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/26/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/26/2018	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		5/26/2018	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		5/26/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		5/26/2018	CJR	1
SUR - 4-Bromofluorobenzene	99	REC %			1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677H
Sample ID 4159 SILVER CREE
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/26/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/26/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/26/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/26/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/26/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/26/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/26/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/26/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/26/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/26/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/26/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/26/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/26/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/26/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/26/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/26/2018	CJR	1
cis-1,2-Dichloroethene	0.94 "J"	ug/l	0.37	1.16	1	8260B		5/26/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/26/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/26/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/26/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/26/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/26/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/26/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/26/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/26/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/26/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/26/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/26/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/26/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/26/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/26/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/26/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/26/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/26/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/26/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/26/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/26/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/26/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677H
Sample ID 4159 SILVER CREE
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/26/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/26/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/26/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/26/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		5/26/2018	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1	8260B		5/26/2018	CJR	1
SUR - Dibromofluoromethane	97	REC %			1	8260B		5/26/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677I
Sample ID 4101 THUNDER RI
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/26/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/26/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/26/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/26/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/26/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/26/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/26/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/26/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/26/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/26/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/26/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/26/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/26/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/26/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/26/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/26/2018	CJR	1
cis-1,2-Dichloroethene	1.32	ug/l	0.37	1.16	1	8260B		5/26/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/26/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/26/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/26/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/26/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/26/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/26/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/26/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/26/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/26/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/26/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/26/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/26/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/26/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/26/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/26/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/26/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/26/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/26/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/26/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/26/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/26/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677I
Sample ID 4101 THUNDER RI
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/26/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/26/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/26/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/26/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		5/26/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		5/26/2018	CJR	1
SUR - 4-Bromofluorobenzene	94	REC %			1	8260B		5/26/2018	CJR	1
SUR - Dibromofluoromethane	97	REC %			1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677J
Sample ID 4111 THUNDER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/26/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/26/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/26/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/26/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/26/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/26/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/26/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/26/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/26/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/26/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/26/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/26/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/26/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/26/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/26/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/26/2018	CJR	1
cis-1,2-Dichloroethene	1.05 "J"	ug/l	0.37	1.16	1	8260B		5/26/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/26/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/26/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/26/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/26/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/26/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/26/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/26/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/26/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/26/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/26/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/26/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/26/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/26/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/26/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/26/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/26/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/26/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/26/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/26/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/26/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/26/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677J
Sample ID 4111 THUNDER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/26/2018	CJR	1
Vinyl Chloride	0.21 "J"	ug/l	0.2	0.65	1	8260B		5/26/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/26/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/26/2018	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		5/26/2018	CJR	1
SUR - Dibromofluoromethane	102	REC %			1	8260B		5/26/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		5/26/2018	CJR	1
SUR - 4-Bromofluorobenzene	96	REC %			1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677K
Sample ID 3817 VIEBAHN
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/26/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/26/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/26/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/26/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/26/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/26/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/26/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/26/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/26/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/26/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/26/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/26/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/26/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/26/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/26/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/26/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/26/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/26/2018	CJR	1
cis-1,2-Dichloroethene	0.70 "J"	ug/l	0.37	1.16	1	8260B		5/26/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/26/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/26/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/26/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/26/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/26/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/26/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/26/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/26/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/26/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/26/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/26/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/26/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/26/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/26/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/26/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/26/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/26/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/26/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/26/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/26/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/26/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/26/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/26/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/26/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677K
Sample ID 3817 VIEBAHN
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/26/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/26/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/26/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/26/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		5/26/2018	CJR	1
SUR - 4-Bromofluorobenzene	99	REC %			1	8260B		5/26/2018	CJR	1
SUR - Dibromofluoromethane	102	REC %			1	8260B		5/26/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		5/26/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677L
Sample ID 3417 HECKER
Sample Matrix Water
Sample Date 5/21/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		5/29/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		5/29/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		5/29/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		5/29/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		5/29/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		5/29/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		5/29/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		5/29/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/29/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		5/29/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		5/29/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		5/29/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		5/29/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		5/29/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		5/29/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		5/29/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		5/29/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		5/29/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		5/29/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		5/29/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		5/29/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		5/29/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		5/29/2018	CJR	1
cis-1,2-Dichloroethene	1.87	ug/l	0.37	1.16	1	8260B		5/29/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		5/29/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		5/29/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		5/29/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		5/29/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		5/29/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		5/29/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		5/29/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		5/29/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		5/29/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		5/29/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		5/29/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		5/29/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		5/29/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		5/29/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		5/29/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		5/29/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		5/29/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		5/29/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		5/29/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		5/29/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		5/29/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		5/29/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		5/29/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		5/29/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		5/29/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		5/29/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34677
Project # 60135471.34

Lab Code 5034677L
Sample ID 3417 HECKER
Sample Matrix Water
Sample Date 5/21/2018

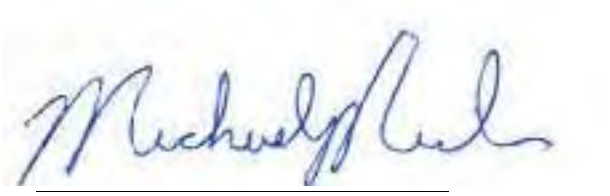
	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		5/29/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		5/29/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		5/29/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		5/29/2018	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		5/29/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		5/29/2018	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1	8260B		5/29/2018	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		5/29/2018	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



CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 361( )

Page 1 of 2

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #: 60135471.34	
Sampler: (signature) Sarah E Krueger	
Project (Name / Location): Former Newton Gravel Pit, Manitowoc WI	
Reports To: Dave Henderson	Invoice To: See left
Company AECOM	Company
Address 1555 North River Center Suite 214	Address
City State Zip Milwaukee WI 53212	City State Zip
Phone (414) 944-6190	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
503467 7 A	4027 Thunder	5/18/18	0930		X	N	3	GW	HCl													X		
B	3618 CTH CR	5/21/18	0945		X	N	3	GW	HCl													X		
C	3721 Black Hawk	5/21/18	1010		X	N	3	GW	HCl													X		
D	3911 Black Hawk	5/21/18	1040		X	N	3	GW	HCl													X		
E	3327 Hecker		1115		X	N	3	GW	HCl													X		
F	3102 Hecker		1140		X	N	3	GW	HCl													X		
G	3327 Hecker Dup		1115		X	N	3	GW	HCl													X		
H	4159 Silver Creek		1545		X	N	3	GW	HCl													X		
I	4101 Thunder Ridge		1620		X	N	3	GW	HCl													X		
J	4111 Thunder		1710		X	N	3	GW	HCl													X		

Analysis Requested | Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)
Analysis per contract

Sample Integrity - To be completed by receiving lab.
Method of Shipment: SCL
Temp. of Temp. Blank ___ °C On Ice: ✓
Cooler seal intact upon receipt: ___ Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Sarah E Krueger	0725	5/[illegible]/18			

Received in Laboratory By: [signature] -SCL Time: 7:37 AM Date: 5-23-18

CHAIN OF CUSTODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 36[illegible]9

Page 2 of 2

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : | **Quote No.:**

Project #: 60135471.34

Sampler: (signature) Sarah E Krueger

Project (Name / Location): Former Newton Gravel Pit, Manitowoc WI

Reports To: Dave Henderson	Invoice To: see left
Company AECOM	Company
Address 1555 NORTH RIVER CENTER SUITE 214	Address
City State Zip MILWAUKEE WI 53212	City State Zip
Phone (414) 944-6490	Phone
FAX	FAX

Analysis Requested | **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
503477 K	3817 Viebahn	5/21/18	1750		X	N	3	GW	HCl													X		
L	3417 Hecker	5/21/18	1815		X	N	3	GW	HCl													X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)
Analysis per contract.

Sample Integrity - To be completed by receiving lab.
Method of Shipment: SEL
Temp. of Temp. Blank ___ °C On Ice: ✓
Cooler seal intact upon receipt: ✓ Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Sarah E Krueger	0725	5/23/18			

Received in Laboratory By: [signature] - SEL Time: 7:20 AM Date: 5-23-18

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 *12-Jun-18*

Project Name NEWTON PIT **Invoice #** E34733
Project # 60135471.34

Lab Code 5034733A
Sample ID 3027 ORCHARD
Sample Matrix Water
Sample Date 5/31/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		6/11/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		6/11/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		6/11/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		6/11/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		6/11/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		6/11/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		6/11/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/11/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		6/11/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		6/11/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		6/11/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		6/11/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		6/11/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		6/11/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		6/11/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		6/11/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		6/11/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		6/11/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		6/11/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		6/11/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		6/11/2018	CJR	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.16	1	8260B		6/11/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		6/11/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		6/11/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		6/11/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		6/11/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		6/11/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34733
Project # 60135471.34

Lab Code 5034733A
Sample ID 3027 ORCHARD
Sample Matrix Water
Sample Date 5/31/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		6/11/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		6/11/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		6/11/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		6/11/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		6/11/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/11/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		6/11/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		6/11/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		6/11/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		6/11/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		6/11/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		6/11/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		6/11/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		6/11/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		6/11/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		6/11/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		6/11/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		6/11/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		6/11/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		6/11/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		6/11/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/11/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		6/11/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		6/11/2018	CJR	1
SUR - Dibromofluoromethane	102	REC %			1	8260B		6/11/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		6/11/2018	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1	8260B		6/11/2018	CJR	1
SUR - Toluene-d8	96	REC %			1	8260B		6/11/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34733
Project # 60135471.34

Lab Code 5034733B
Sample ID 4027 THUNDER
Sample Matrix Water
Sample Date 5/31/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		6/11/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		6/11/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		6/11/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		6/11/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		6/11/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		6/11/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		6/11/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/11/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		6/11/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		6/11/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		6/11/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		6/11/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		6/11/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		6/11/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		6/11/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		6/11/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		6/11/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		6/11/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		6/11/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		6/11/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		6/11/2018	CJR	1
cis-1,2-Dichloroethene	1 "J"	ug/l	0.37	1.16	1	8260B		6/11/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		6/11/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		6/11/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		6/11/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		6/11/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		6/11/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		6/11/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		6/11/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		6/11/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		6/11/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		6/11/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/11/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		6/11/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		6/11/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		6/11/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		6/11/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		6/11/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		6/11/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		6/11/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		6/11/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		6/11/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		6/11/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		6/11/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		6/11/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		6/11/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		6/11/2018	CJR	1

Project Name NEWTON PIT **Invoice #** E34733
Project # 60135471.34

Lab Code 5034733B
Sample ID 4027 THUNDER
Sample Matrix Water
Sample Date 5/31/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		6/11/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/11/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		6/11/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		6/11/2018	CJR	1
SUR - Toluene-d8	96	REC %			1	8260B		6/11/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	86	REC %			1	8260B		6/11/2018	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			1	8260B		6/11/2018	CJR	1
SUR - Dibromofluoromethane	96	REC %			1	8260B		6/11/2018	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

CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 3006

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #

Account No. : **Quote No.:**

Project #: 60135471 34

Sampler: (signature) DSH

Project (Name / Location): Newton Pit

Reports To: Dave Henderson	Invoice To: Same
Company AECOM	Company
Address 1555 Rivercenter	Address
City State Zip MKe WI 53212	City State Zip
Phone 414 429 8304	Phone
FAX	FAX

Analysis Requested **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
5034733 A	3027 Orchard	5/31	1455		X	N	3	GW	HCl
B	4027 Thunder	5/31	1455		X	N	3	GW	HCl

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
												X		
												X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

3027 Orchard
4027 Thunder

Sample Integrity - To be completed by receiving lab.

Method of Shipment: Ge

Temp. of Temp. Blank ___ °C On Ice: X

Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
D.S. Henderson	7:40	6/1/18			

Received in Laboratory By: [signature] Time: 8:00 Date: 6/5/18

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 *13-Jun-18*

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34734
Project # 60135471.34

Lab Code 5034734A
Sample ID 4111 THUNDER RI
Sample Matrix Water
Sample Date 6/5/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		6/11/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		6/11/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		6/11/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		6/11/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		6/11/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		6/11/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		6/11/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		6/11/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		6/11/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		6/11/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		6/11/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		6/11/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		6/11/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		6/11/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		6/11/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		6/11/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		6/11/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		6/11/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		6/11/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		6/11/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		6/11/2018	CJR	1
cis-1,2-Dichloroethene	0.55 "J"	ug/l	0.37	1.16	1	8260B		6/11/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		6/11/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		6/11/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		6/11/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		6/11/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		6/11/2018	CJR	1

Project Name FMR NEWTON GRAVEL PIT **Invoice #** E34734
Project # 60135471.34

Lab Code 5034734A
Sample ID 4111 THUNDER RI
Sample Matrix Water
Sample Date 6/5/2018

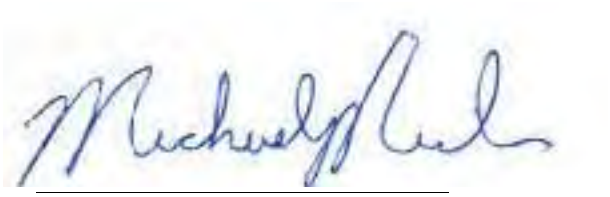
	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		6/11/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		6/11/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		6/11/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		6/11/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		6/11/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		6/11/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		6/11/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		6/11/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		6/11/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		6/11/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		6/11/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		6/11/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		6/11/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		6/11/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		6/11/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		6/11/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		6/11/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		6/11/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		6/11/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		6/11/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		6/11/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		6/11/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		6/11/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		6/11/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		6/11/2018	CJR	1
SUR - Toluene-d8	96	REC %			1	8260B		6/11/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	94	REC %			1	8260B		6/11/2018	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			1	8260B		6/11/2018	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		6/11/2018	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



CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 296

Page ____ of ____

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
____ Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #: 60135471.34	
Sampler: (signature) Sarah E Krueger	
Project (Name / Location): FORMER NEWTON GRAVEL PIT	
Reports To: DAVE HENDERSON	Invoice To:
Company AECOM	Company
Address	Address
City State Zip	City State Zip
Phone	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
503473-1A	4111 THUNDERRIDGE	6/5/18	0745		X	N	3	GW	HCl													X		

Analysis Requested | **Other Analysis**

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Sarah E Krueger	0900	6/5/18			

Received in Laboratory By: Nate Clark Time: 9:00 Date: 6/5/18