

From: Beggs, Tauren R - DNR
Sent: Monday, February 26, 2018 3:29 PM
To: Johnson, Dave M - DNR
Cc: Kasdorf, James H Jr - DNR
Subject: Manitowoc City / Former Newton Tn Gravel Pit: Private Well Results and Letter to City of Manitowoc
Attachments: PW Results 2017-2018.xlsx; Sample Location Map.pdf; AECOM Map.pdf; Regional GW Flow Map.pdf; 20180126_99_PW_Req.pdf

Hi Dave,

As requested by Jim, I am providing you with the results from the DNR sampling effort in the Town of Newton and Town of Manitowoc. Attached is a table of the results, an aerial map of the area sampled, and the most recent plume map provided by AECOM in their most recent potable well sampling report (submitted prior to known 2201 Elm Rd ES exceedance). I also wanted to provide you with a regional groundwater flow map based on private well log information that AECOM provided to DNR during the technical meeting we had back on April 1, 2015. The letter that was sent to the City of Manitowoc for additional private well investigation and replacement is also attached. This letter was issued prior to the new ES exceedance at 2201 Elm Rd.

If you need anything else, please let me know.

Thanks,

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Tauren R. Beggs

Hydrogeologist & Northeast Region Land Recycling Expert
Remediation and Redevelopment Program
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Sample Location Address:		2915 S. 26th St	2918 S. 26th St	2918 S. 26th St	3008 S. 26th St	3008 S. 26th St	3202 S. 26th St	2501 Nelson Ln	2201 Elm Rd	2201 Elm Rd	2408 Elm Rd	2417 Elm Rd	2514 Elm Rd	
Sample Date:		12/14/2017	8/15/2017	9/5/2017	11/8/2017	12/14/2017	12/19/2017	12/19/2017	12/19/2017	2/14/2018	12/19/2017	12/19/2017	12/19/2017	
VOCs (ug/L)	ES	PAL												
Cis-1,2-dichloroethylene	70	7	<0.30	1.1	0.85 J	1.0	0.85	<0.30	<0.30	0.51	0.55	<0.30	<0.30	<0.30
Vinyl Chloride	0.2	0.02	<0.20	0.21 J	0.26 J	0.47	0.55	<0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20

Note:

All other VOCs analyzed were below the Limit of Detection (LOD)

2918 S. 26th St: Initial sample collected by the property owner, confirmation sample collected by the City

All other samples collected by DNR

BOLD: Exceeds Enforcement Standard (ES)

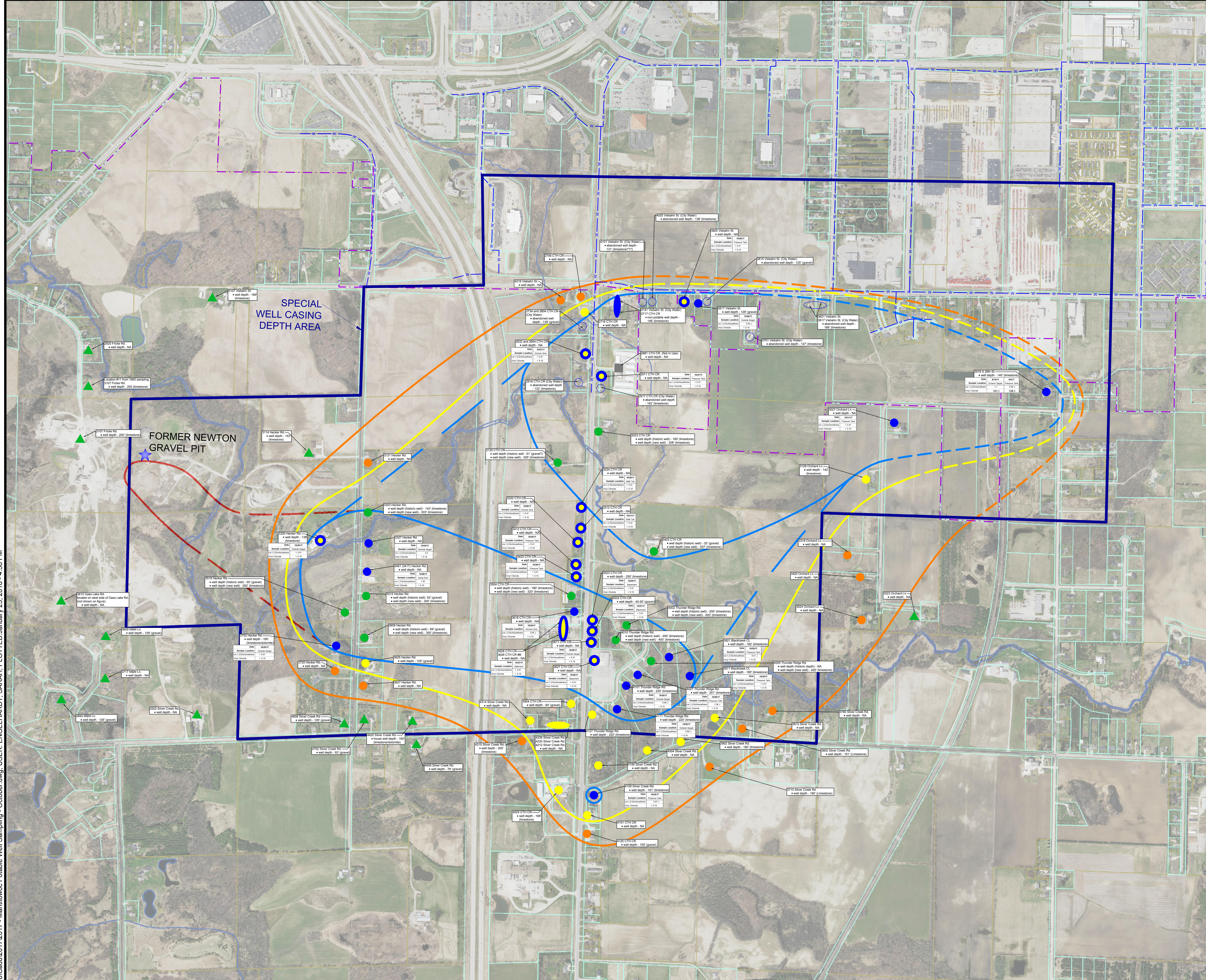
Italic: > Exceeds Preventive Action Limit (PAL)

Sample Location Map for DNR Private Well Sampling



Date: 2/26/2018

File: \\US\S\W\K\FS001\prod\Dat\Library\work\82518\Cadd\2017\2017 - Manitowoc Potable Well Sampling - October.dwg; USER: ENGEHARDT, SARAH; PLOTTED: January 25, 2018 - 4:38 PM

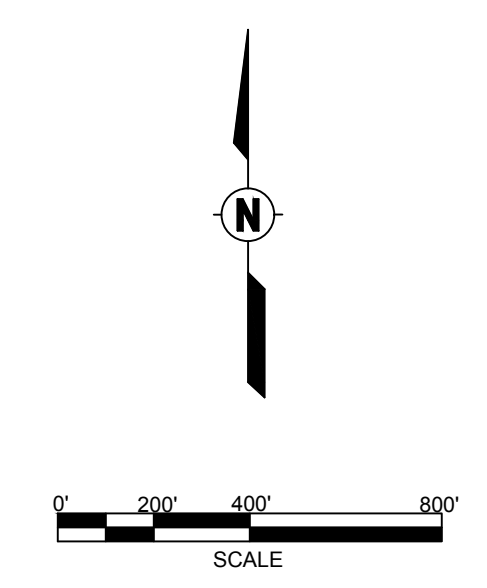


LEGEND:

- PROPERTY BOUNDARY - GRAVEL PIT
- PROPERTY BOUNDARY - CITY LIMITS
- UTILITIES:
- W POTABLE WATER SUPPLY (from City of Manitowoc)
- POTABLE WELL SAMPLE LOCATIONS
- -WITHIN TARGET ZONE, WITH NO DETECTS
- -WITHIN TARGET ZONE, WITH NO DETECTS
- -WITHIN SENTINEL ZONE-3 YEAR, WITH NO DETECTS

- POTABLE WELL SAMPLE LOCATIONS (CONTINUED)
- -WITHIN SENTINEL ZONE-5 YEAR, WITH NO DETECTS
- -REPLACEMENT WELL WITHIN TARGET ZONE, WITH NO CURRENT DETECTS
- ▲ -UPGRADED AND HISTORICALLY SAMPLED WELLS, WITH NO DETECTS
- -FORMER TARGET ZONE WELL, WITH DETECTS, BUT NOW ON CITY WATER
- -WELL OUT OF SERVICE

- SAMPLING ZONES
- TARGET ZONE
- SENTINEL ZONE-3 YEAR
- SENTINEL ZONE-5 YEAR
- FORMER GRAVEL PIT ZONE



AECOM
 Milwaukee Office
 1555 RiverCenter Dr
 Milwaukee, WI
 414.944.6080



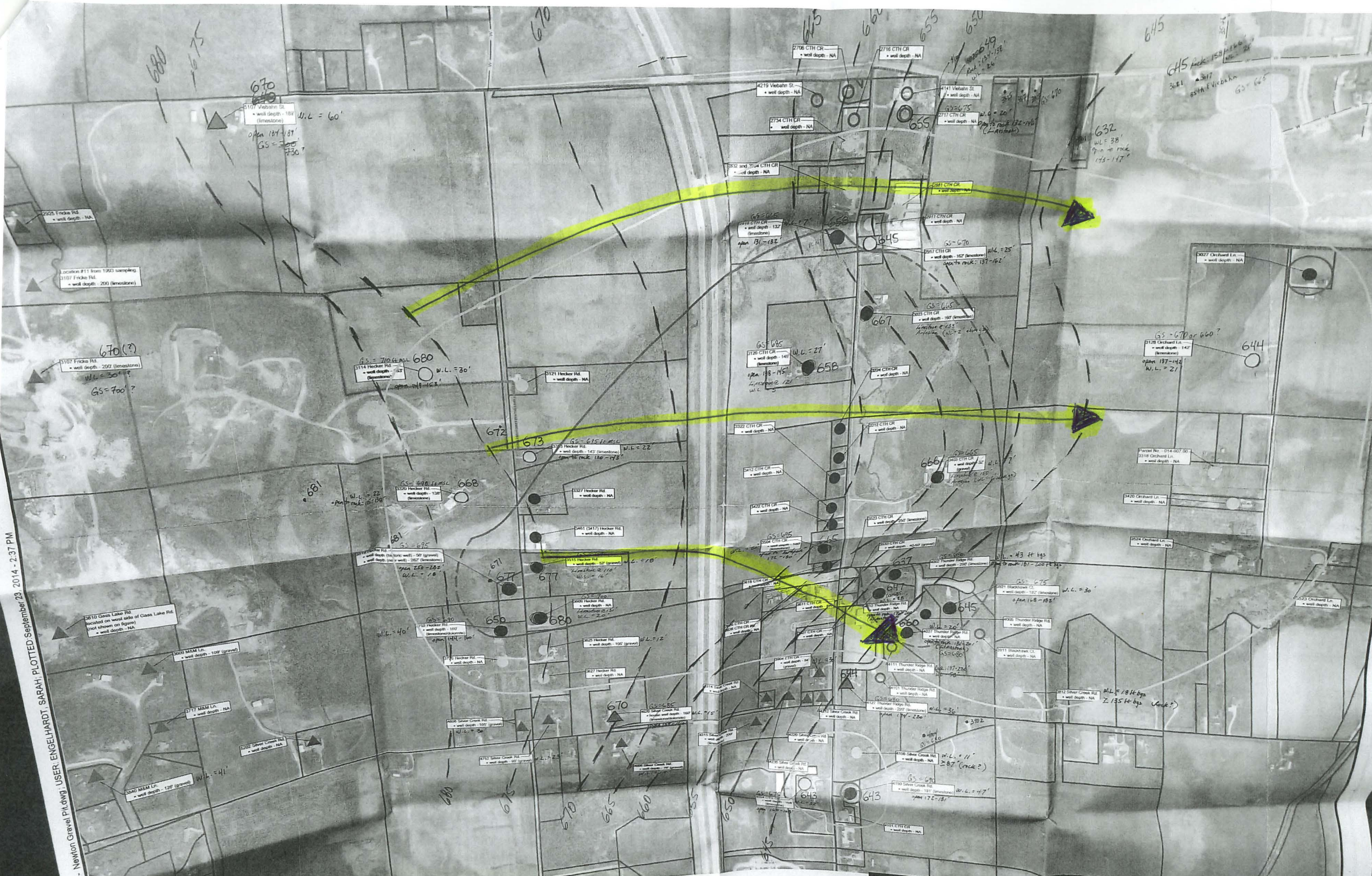
FORMER NEWTON GRAVEL PIT

OCTOBER 2017

POTABLE WELL SAMPLING RESULTS

Project Number: 60135471 Drawn By: SAE Date: 12/21/2017 Figure No. 2

2014 Potable Well Sampling - Newton Gravel Pit Sampling - User: ENGELHARDT, SARAH, PLOTTED September 23, 2014 - 2:37 PM



LEGEND:
- - - PROPERTY BOUNDARY
- - - PROPERTY BOUNDARY - CITY LIMITS
- - - UTILITIES
- - - POTABLE WATER SUPPLY (from City of Manitowoc)
- - - POTABLE WELL SAMPLE LOCATIONS
- - - TARGET ZONE

• VOCs = Volatile Organic Compounds
• cis-DCE = cis-1,2-Dichloroethene
• trans-DCE = trans-1,2-Dichloroethene
• 1,2-DCA = 1,2-Dichloroethane
• 1,1-DCE = 1,1-Dichloroethene
• VC = Vinyl Chloride
• bold = PAL exceedance
• bold and underlined = ES exceedance
• bold and underlined = Preventive Action Limit
• PAL = Preventive Action Limit
• ES = Enforcement Standard

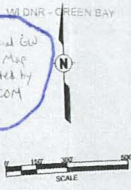
— TARGET ZONE
— SENTINEL ZONE
○ DATA GAP SAMPLE LOCATION

Gw Flow Direction

NOTES:

- 1. VOCs detected from likely laboratory or sampling cross-contamination not reported on figure.
- 2. VOC values for 2013-2014 sampling events reported on figure.
- 3. Analytical data presented in µg/L.
- 4. All potable wells sampled are outside of the City of Manitowoc limits.

RECEIVED
APR 01 2015
MILWAUKEE GREEN BAY



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Milwaukee, WI
414.944.6080

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FORMER NEWTON GRAVEL PIT

2014 QUARTER 2 - POTABLE WELL PROPOSED SAMPLING LOCATIONS

Project Number:
60311767

Drawn By:
SAE

Date:
9/23/2014

Figure No. 3



January 26, 2018

Kathleen McDaniel
City of Manitowoc
900 Quay St
Manitowoc, WI 54220

Subject: Potable Well Plume Delineation Work and Potable Well Replacement Request

Dear Ms. McDaniel,

The Department of Natural Resources (DNR) has had multiple discussions regarding plume delineation during meetings with the City of Manitowoc (City) over the past few years for the open case Manitowoc City / Former Newton Tn Gravel Pit, BRRTS # 02-36-000268. Based on the most recent potable well sampling data collected by a property owner at 2915 South 26th Street in the Town of Newton, sampling conducted by the City of Manitowoc, and sampling conducted by the DNR, the DNR proposes that plume delineation should be revisited. The DNR recognizes the City as the responsible party and based on the many discussions and data provided to date, the DNR sees evidence that correlates between the contamination from the gravel pit source and the newly identified impacted private wells. The DNR is requesting that if the City wants to conduct additional plume delineation work to provide multiple lines of evidence to show the contamination is not migrating from the gravel pit to the private wells to the northeast, then a scope of work should be submitted (e.g. pulling pumps/investigating well construction, aquifer sampling, monitoring well installation, etc.).

Based on the potable well sampling from South 26th Street, Nelson Lane and Elm Road, with comparison to sampling from the Manitowoc City / Former Newton Tn Gravel Pit investigation, it appears there is still residual chlorinated solvent contamination above enforcement standards that has not been addressed. The DNR proposes the City of Manitowoc replaces the impacted private well at 3008 South 26th Street to provide a permanent clean water solution.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tauren R. Beggs'.

Tauren R. Beggs
Hydrogeologist
Remediation & Redevelopment Program