

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

May 28, 2019

John and Lynn Troka
N11 W31230 Bunker Hill
Delafield, WI 53018

Re: April 2019 Private Well Monitoring Results (PW-11)

Dear Mr. and Mrs. Troka:

Water samples were collected from your well located at N11 W31230 Bunker Hill on April 29, 2019 as part of the private well monitoring program associated with the closed Delafield Sanitary Transfer and Landfill. The samples were collected by Environmental Sampling Corporation (ESC) personnel and submitted to CT Laboratories, Inc. (WDNR Lab Certification #157066030) for analysis.

The water samples collected from the well were tested for the following semi-annual monitoring parameters: alkalinity, chloride, hardness, sulfate, cyanide, total kjeldahl nitrogen, nitrate, nitrite, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, sodium, lead, antimony, selenium, thallium, zinc, and volatile organic compounds (VOCs). The VOC analysis covers a wide range of compounds that are generally found in household and industrial solvents, degreasers, cleaners, gases and petroleum products. The VOC analysis can detect the presence of more than forty compounds. In addition to the parameters listed above, the sample was tested in the field for pH, temperature, and specific conductance.

The Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) have established groundwater quality standards for the protection of human health and the environment. Contaminant concentrations that are detected at levels less than the EPA Maximum Contaminant Level (MCL) and the WDNR Enforcement Standard (ES) are believed to be safe for a water supply. In general, the federal MCL and the Wisconsin ES levels are the same, though for some substances the Wisconsin ES is lower than the MCL. The EPA and WDNR have also established secondary or "aesthetic" standards for select inorganic parameters. These standards are based on the taste and appearance of the water rather than health effects.

No VOCs were detected at concentrations above the laboratory LOD and therefore, not above an applicable MCL or ES in the samples collected from your well. The concentrations of inorganic parameters were less than drinking water standards.

Mr. and Mrs. Troka

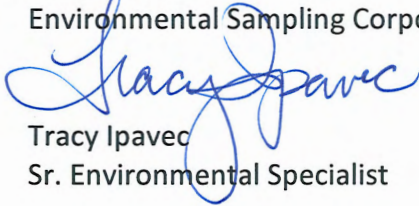
May 28, 2019

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A summary of the water quality results and a copy of the CT Laboratories report are provided with this letter. Should you have any questions concerning our work at the landfill or the water quality results you have received, please feel free to call me at 414-427-5033.

Sincerely,

Environmental Sampling Corporation



Tracy Ipavec

Sr. Environmental Specialist

Attachments

cc: Jason Lowery: WDNR, Madison (electronic copy)
David Buser: WDNR, Milwaukee (electronic copy)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

11	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)															
	Alkalinity	Hardness	Chloride	SO ₄	CN	TKN	Nitrate	Nitrite	As	Ba	Be	Cd	Ca	Cr	Cu	Fe
N11 W31230 Bunker Hill	NS	NS	(250 / 250)	(250 / 250)	(0.2 / 0.2)	NS	(10 / 10)	(1 / 1)	(10 / 10)	(2000 / 2000)	(4 / 4)	(5 / 5)	NS	(100 / 100)	(1300 / 1300)	(300 / 300)
DATE	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
10/30/17	360	392	150	21	<0.0040	<0.52	3.5	<0.040	<0.60	87.7	<0.38	<0.40	90.9	<2.0	108	<59
04/27/18	360	345 M	<1.0	19	<0.0030	<0.23	3.5	<0.14	0.66	85.1	<0.38	<0.40	76.8 M	<2.0	80.9	<59
10/29/18	360	382	120	18	<0.0030	0.31 J	3.3	<0.14	<0.60	77.5	<0.38	<0.40	85.4	<2.0	<3.9	<59
04/29/19	350	382	130	18	<0.0030	1.1	2.8	<0.14	<0.60	80.8	<0.38	<0.40	86.2	<2.0	5.3 J	<59

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

11	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES)								FIELD PARAMETERS			VOCs (EPA MCL / WDNR ES)
	Mg	Mn # (50 / 50)	Na	Pb (15 / 15)	Sb (6 / 6)	Se (50 / 50)	Tl (2 / 2)	Zn (5000 / 5000)	pH	Conductivity	Temp.	Chloromethane (NS / 30)
DATE	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	std. Units	umhos/cm	deg. C	ug/L
N11 W31230 Bunker Hill	NS		NS	(15 / 15)	(6 / 6)	(50 / 50)	(2 / 2)	(5000 / 5000)	NS	NS	NS	NS
10/30/17	40.0	7.0 J	70.5	4.8	<0.60	<1.0	<0.19	120	7.41	1,050	10.9	<0.19
04/27/18	37.2 M	86.9	57.9	1.3	<0.60	<1.0	<0.19	50.4	7.60	915	12.7	0.47 J B
10/29/18	41.1	4.8 J	63.3	<0.43	<0.60	<1.0	<0.19	<2.2	7.50	983	11.3	<0.19
04/29/19	40.6	4.6 J	66.6	<0.43	<0.60	<1.0	<0.19	<2.2	7.45	955	12.4	<0.19

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

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s.u. = standard units

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EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273731 Sample Description: 11

DNR License/Well #: 00719/235

Sampled: 04/29/2019 1030

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Field Results										
Color (Field)	CLEAR		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Conductivity (Field)	955	umhos/cm	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
pH (Field)	7.45	S.U.	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Temperature (Field)	12.4	Deg. C	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Inorganic Results										
Total Kjeldahl Nitrogen	1.1	mg/L	0.23	0.76	1		05/01/2019 12:00	05/03/2019 13:52	CLB	EPA 351.2
Nitrate Nitrogen Total	2.8	mg/L	0.12	0.40	1			04/30/2019 15:44	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		04/30/2019 15:44	TMG	EPA 300.0
Total Chloride	130	mg/L	10	32	10			04/30/2019 16:04	TMG	EPA 300.0
Total Sulfate	18	mg/L	0.80	2.5	1			04/30/2019 15:44	TMG	EPA 300.0

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273750 Sample Description: 11

DNR License/Well #: 00719/235 Sampled: 04/29/2019 1030

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Alkalinity	350	mg/L	4.0	4.0	1			05/09/2019 15:00	HLB	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	05/10/2019 12:00	05/10/2019 19:10	SAW	EPA 335.4
Metals Results										
Total Barium	80.8	ug/L	0.70	2.5	1			05/07/2019 13:51	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U M		05/07/2019 13:51	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		05/07/2019 13:51	NAH	EPA 200.7
Total Calcium	86200	ug/L	31	110	1			05/07/2019 13:51	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		05/07/2019 13:51	NAH	EPA 200.7
Total Copper	5.3	ug/L	3.9	13	1	J		05/07/2019 13:51	NAH	EPA 200.7
Total Iron	<59	ug/L	59	200	1	U		05/07/2019 13:51	NAH	EPA 200.7
Total Magnesium	40600	ug/L	25	84	1			05/07/2019 13:51	NAH	EPA 200.7
Total Manganese	4.6	ug/L	2.2	7.3	1	J		05/07/2019 13:51	NAH	EPA 200.7
Total Zinc	<2.2	ug/L	2.2	7.3	1	U		05/07/2019 13:51	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		05/03/2019 11:49	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	05/06/2019 13:30	05/06/2019 18:29	MDS	EPA 200.9

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273750 Sample Description:11

DNR License/Well #: 00719/235 Sampled: 04/29/2019 1030

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Lead	<0.43	ug/L	0.43	1.4	1	U		05/07/2019 14:11	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	05/06/2019 13:30	05/08/2019 11:21	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	05/06/2019 08:45	05/14/2019 12:15	MDS	EPA 200.9
Total Sodium	66.60	mg/L	0.030	0.10	1	Y		05/01/2019 13:19	MDS	EPA 200.7
Total Hardness	382	mg/L	0.18	0.61	1			05/07/2019 13:51	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 10:23	RLD	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 10:23	RLD	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 10:23	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273750 Sample Description:11

DNR License/Well #: 00719/235 Sampled: 04/29/2019 1030

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 10:23	RLD	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 10:23	RLD	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 10:23	RLD	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 10:23	RLD	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		05/06/2019 10:23	RLD	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 10:23	RLD	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 10:23	RLD	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 10:23	RLD	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 10:23	RLD	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 10:23	RLD	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		05/06/2019 10:23	RLD	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		05/06/2019 10:23	RLD	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		05/06/2019 10:23	RLD	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 10:23	RLD	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		05/06/2019 10:23	RLD	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		05/06/2019 10:23	RLD	EPA 524.2
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 10:23	RLD	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 10:23	RLD	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U		05/06/2019 10:23	RLD	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U		05/06/2019 10:23	RLD	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 10:23	RLD	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U		05/06/2019 10:23	RLD	EPA 524.2

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CT LAB#: 273750 Sample Description:11

DNR License/Well #: 00719/235 Sampled: 04/29/2019 1030

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U		05/06/2019 10:23	RLD	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 10:23	RLD	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 10:23	RLD	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 10:23	RLD	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 10:23	RLD	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U		05/06/2019 10:23	RLD	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U		05/06/2019 10:23	RLD	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 10:23	RLD	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 10:23	RLD	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 10:23	RLD	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U		05/06/2019 10:23	RLD	EPA 524.2

Notes: All LOD/LOQs are adjusted to reflect dilution, percent solids, and any differences in the sample weight / volume as compared to standard amounts. "U" qualifier indicates concentration of analyte was below the detection limit. "J" qualifer indicates an estimated value between the LOD and LOQ.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Brett M. Szymanski
Project Manager
Submitted by: 608-356-2760

<u>Code</u>	<u>Description</u>	<u>QC Qualifiers</u>
B	Analyte detected in the associated Method Blank.	
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	Incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
 Wisconsin (DATCP) Bacteriology ID# 105-289
 Louisiana NELAP (primary) ID# ACC20160002
 Illinois NELAP Lab ID# 200073
 Kansas NELAP Lab ID# E-10368
 Virginia NELAP Lab ID# 460203
 Maryland Lab ID# WI00061
 ISO/IEC 17025-2005 A2LA Cert # 3806.01
 DoD-ELAP A2LA 3806.01
 GA EPD Stipulation ID ACC20160002

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

May 28, 2019

Mr. Ward Gronewold
W311 N1052 Fairfield Way
Delafield, WI 53018

Re: April 2019 Private Well Monitoring Results (PW-13)

Dear Mr. Gronewold:

Water samples were collected from your well located at W311 N1052 Fairfield Way on April 29, 2019 as part of the private well monitoring program associated with the closed Delafield Sanitary Transfer and Landfill. The samples were collected by Environmental Sampling Corporation (ESC) personnel and submitted to CT Laboratories, Inc. (WDNR Lab Certification #157066030) for analysis.

The water samples collected from the well were tested for the following semi-annual monitoring parameters: alkalinity, chloride, hardness, sulfate, cyanide, total kjeldahl nitrogen, nitrate, nitrite, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, sodium, lead, antimony, selenium, thallium, zinc, and volatile organic compounds (VOCs). The VOC analysis covers a wide range of compounds that are generally found in household and industrial solvents, degreasers, cleaners, gases and petroleum products. The VOC analysis can detect the presence of more than forty compounds. In addition to the parameters listed above, the sample was tested in the field for pH, temperature, and specific conductance.

The Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) have established groundwater quality standards for the protection of human health and the environment. Contaminant concentrations that are detected at levels less than the EPA Maximum Contaminant Level (MCL) and the WDNR Enforcement Standard (ES) are believed to be safe for a water supply. In general, the federal MCL and the Wisconsin ES levels are the same, though for some substances the Wisconsin ES is lower than the MCL. The EPA and WDNR have also established secondary or "aesthetic" standards for select inorganic parameters. These standards are based on the taste and appearance of the water rather than health effects.

No VOCs were detected at concentrations above the laboratory LOD and therefore, not above an applicable MCL or ES in the samples collected from your well. The concentrations of inorganic parameters were less than drinking water standards.

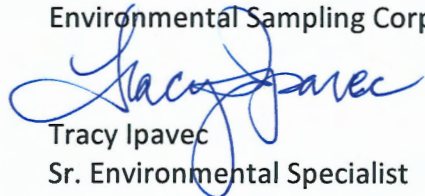
Mr. Gronewold

May 28, 2019

Page 2

A summary of the water quality results and a copy of the CT Laboratories report are provided with this letter. Should you have any questions concerning our work at the landfill or the water quality results you have received, please feel free to call me at 414-427-5033.

Sincerely,
Environmental Sampling Corporation



Tracy Ipavec
Sr. Environmental Specialist

Attachments

cc: Jason Lowery: WDNR, Madison (electronic copy)
David Buser: WDNR, Milwaukee (electronic copy)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

13 W311 N1052 Fairfield Way	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)															
	Alkalinity NS	Hardness NS	Chloride (250 / 250)	SO ₄ (250 / 250)	CN (0.2 / 0.2)	TKN NS	Nitrate (10 / 10)	Nitrite (1 / 1)	As (10 / 10)	Ba (2000 / 2000)	Be (4 / 4)	Cd (5 / 5)	Ca NS	Cr (100 / 100)	Cu (1300 / 1300)	Fe (300 / 300)
DATE	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
11/01/17	310	303	24	40	<0.0040	<0.52	0.52	<0.040	<0.60	88.7	<0.38	<0.40	60.8	<2.0	115	505
04/27/18	320	292	15	39	<0.0030	<0.23	0.46	<0.14	<0.60	105	<0.38	<0.40	56.5	<2.0	13.5	<59
10/30/18	300	343	16	34 M	<0.0030	<0.23	0.56	<0.14	<0.60	110	<0.38	<0.40	65.8	<2.0	9.0	69.4
04/29/19	320	329	27	45	<0.0030	<0.23	0.79	<0.14	<0.60	89.2	<0.38	<0.40	66.9	<2.0	74.7	130 J

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

M=Matrix Spike and/or Matrix Spike Duplicate recover outside acceptable limits.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

505 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO₄: sulfate

Ba: barium

Cr: chromium

Mn: manganese

Se: selenium

CN: cyanide

Be: beryllium

Cu: copper

Na: sodium

Tl: thallium

TKN: total kjeldahl nitrogen

Cd: cadmium

Fe: iron

Pb: lead

Zn: zinc

As: arsenic

Ca: calcium

Mg: magnesium

Sb: antimony

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

13	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES)								FIELD PARAMETERS			VOCs (EPA MCL / WDNR ES)
	Mg	Mn # (50 / 50)	Na	Pb (15 / 15)	Sb (6 / 6)	Se (50 / 50)	Tl (2 / 2)	Zn (5000 / 5000)	pH	Conductivity	Temp.	Chloromethane (NS / 30)
W311 N1052 Fairfield Way	NS		NS	(15 / 15)	(6 / 6)	(50 / 50)	(2 / 2)	(5000 / 5000)	NS	NS	NS	(NS / 30)
DATE	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	std. Units	umhos/cm	deg. C	ug/L
11/01/17	36.7	6.1 J	9.75	7.7	<0.60	<1.0	<0.19	113	7.08	673	15.3	<0.19
04/27/18	36.7	<2.2	8.65	1.6	<0.60	<1.0	<0.19	8.3	7.54	599	11.8	0.34 J B
10/30/18	43.3	<2.2	6.83	<0.43	<0.60	<1.0	<0.19	<2.2	7.19	409	12.1	<0.19
04/29/19	39.4	<2.2	11.60	3.6	<0.60	<1.0	<0.19	15.4	7.68	634	12.4	<0.19

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

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EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

505 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO₄: sulfate

Ba: barium

Cr: chromium

Mn: manganese

Se: selenium

CN: cyanide

Be: beryllium

Cu: copper

Na: sodium

Tl: thallium

TKN: total kjeldahl nitrogen

Cd: cadmium

Fe: iron

Pb: lead

Zn: zinc

As: arsenic

Ca: calcium

Mg: magnesium

Sb: antimony

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273757 Sample Description: 13

DNR License/Well #: 00719/237

Sampled: 04/29/2019 1505

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Field Results										
Color (Field)	CLEAR		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Conductivity (Field)	634	umhos/cm	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
pH (Field)	7.68	S.U.	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Temperature (Field)	12.4	Deg. C	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U	05/01/2019 12:00	05/03/2019 13:53	CLB	EPA 351.2
Nitrate Nitrogen Total	0.79	mg/L	0.12	0.40	1			04/30/2019 16:24	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		04/30/2019 16:24	TMG	EPA 300.0
Total Chloride	27	mg/L	1.0	3.2	1			04/30/2019 16:24	TMG	EPA 300.0
Total Sulfate	45	mg/L	0.80	2.5	1			04/30/2019 16:24	TMG	EPA 300.0

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273758	Sample Description: 13	DNR License/Well #: 00719/237	Sampled: 04/29/2019 1505
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Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Alkalinity	320	mg/L	4.0	4.0	1			05/09/2019 15:00	HLB	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	05/10/2019 12:00	05/10/2019 19:20	SAW	EPA 335.4
Metals Results										
Total Barium	89.2	ug/L	0.70	2.5	1			05/07/2019 14:10	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		05/07/2019 14:10	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		05/07/2019 14:10	NAH	EPA 200.7
Total Calcium	66900	ug/L	31	110	1			05/07/2019 14:10	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		05/07/2019 14:10	NAH	EPA 200.7
Total Copper	74.7	ug/L	3.9	13	1			05/07/2019 14:10	NAH	EPA 200.7
Total Iron	130	ug/L	59	200	1	J		05/07/2019 14:10	NAH	EPA 200.7
Total Magnesium	39400	ug/L	25	84	1			05/07/2019 14:10	NAH	EPA 200.7
Total Manganese	<2.2	ug/L	2.2	7.3	1	U		05/07/2019 14:10	NAH	EPA 200.7
Total Zinc	15.4	ug/L	2.2	7.3	1			05/07/2019 14:10	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		05/03/2019 11:58	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	05/06/2019 13:30	05/06/2019 18:35	MDS	EPA 200.9

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273758 Sample Description:13

DNR License/Well #: 00719/237 Sampled: 04/29/2019 1505

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Lead	3.6	ug/L	0.43	1.4	1			05/07/2019 14:23	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	05/06/2019 13:30	05/08/2019 11:27	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	05/06/2019 08:45	05/14/2019 12:21	MDS	EPA 200.9
Total Sodium	11.60	mg/L	0.030	0.10	1			05/01/2019 13:27	MDS	EPA 200.7
Total Hardness	329	mg/L	0.18	0.61	1			05/07/2019 14:10	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:20	RLD	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 11:20	RLD	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:20	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273758 Sample Description:13

DNR License/Well #: 00719/237 Sampled: 04/29/2019 1505

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:20	RLD	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 11:20	RLD	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:20	RLD	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:20	RLD	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		05/06/2019 11:20	RLD	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:20	RLD	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:20	RLD	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 11:20	RLD	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 11:20	RLD	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:20	RLD	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		05/06/2019 11:20	RLD	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		05/06/2019 11:20	RLD	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		05/06/2019 11:20	RLD	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 11:20	RLD	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		05/06/2019 11:20	RLD	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		05/06/2019 11:20	RLD	EPA 524.2
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:20	RLD	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 11:20	RLD	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U		05/06/2019 11:20	RLD	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U		05/06/2019 11:20	RLD	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 11:20	RLD	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U		05/06/2019 11:20	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273758 Sample Description:13

DNR License/Well #: 00719/237 Sampled: 04/29/2019 1505

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U		05/06/2019 11:20	RLD	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 11:20	RLD	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 11:20	RLD	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 11:20	RLD	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 11:20	RLD	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U		05/06/2019 11:20	RLD	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U		05/06/2019 11:20	RLD	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 11:20	RLD	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:20	RLD	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 11:20	RLD	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U		05/06/2019 11:20	RLD	EPA 524.2

Notes: All LOD/LOQs are adjusted to reflect dilution, percent solids, and any differences in the sample weight / volume as compared to standard amounts. "U" qualifier indicates concentration of analyte was below the detection limit. "J" qualifer indicates an estimated value between the LOD and LOQ.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Brett M. Szymanski
Project Manager
Submitted by: 608-356-2760

<u>Code</u>	<u>Description</u>	<u>QC Qualifiers</u>
B	Analyte detected in the associated Method Blank.	
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	Incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
 Wisconsin (DATCP) Bacteriology ID# 105-289
 Louisiana NELAP (primary) ID# ACC20160002
 Illinois NELAP Lab ID# 200073
 Kansas NELAP Lab ID# E-10368
 Virginia NELAP Lab ID# 460203
 Maryland Lab ID# WI00061
 ISO/IEC 17025-2005 A2LA Cert # 3806.01
 DoD-ELAP A2LA 3806.01
 GA EPD Stipulation ID ACC20160002

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

May 28, 2019

James and Rita Lofy
N9 W31146 Concord Ct.
Delafield, WI 53018

Re: April 2019 Private Well Monitoring Results (PW-15)

Dear Mr. and Mrs. Lofy:

Water samples were collected from your well located at N9 W31146 Concord Court on April 29, 2019 as part of the private well monitoring program associated with the closed Delafield Sanitary Transfer and Landfill. The samples were collected by Environmental Sampling Corporation (ESC) personnel and submitted to CT Laboratories, Inc. (WDNR Lab Certification #157066030) for analysis.

The water samples collected from the well were tested for the following semi-annual monitoring parameters: alkalinity, chloride, hardness, sulfate, cyanide, total kjeldahl nitrogen, nitrate, nitrite, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, sodium, lead, antimony, selenium, thallium, zinc, and volatile organic compounds (VOCs). The VOC analysis covers a wide range of compounds that are generally found in household and industrial solvents, degreasers, cleaners, gases and petroleum products. The VOC analysis can detect the presence of more than forty compounds. In addition to the parameters listed above, the sample was tested in the field for pH, temperature, and specific conductance.

The Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) have established groundwater quality standards for the protection of human health and the environment. Contaminant concentrations that are detected at levels less than the EPA Maximum Contaminant Level (MCL) and the WDNR Enforcement Standard (ES) are believed to be safe for a water supply. In general, the federal MCL and the Wisconsin ES levels are the same, though for some substances the Wisconsin ES is lower than the MCL. The EPA and WDNR have also established secondary or "aesthetic" standards for select inorganic parameters. These standards are based on the taste and appearance of the water rather than health effects.

No VOCs were detected at concentrations above the laboratory LOD and therefore, not above an applicable MCL or ES in the samples collected from your well. The concentrations of inorganic parameters were less than drinking water standards.

Mr. and Mrs. Lofy

May 28, 2019

Page 2

A summary of the water quality results and a copy of the CT Laboratories report are provided with this letter. Should you have any questions concerning our work at the landfill or the water quality results you have received, please feel free to call me at 414-427-5033.

Sincerely,
Environmental Sampling Corporation



Tracy Ipavec
Sr. Environmental Specialist

Attachments

cc: Jason Lowery: WDNR, Madison (electronic copy)
David Buser: WDNR, Milwaukee (electronic copy)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

15	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)															
	Alkalinity	Hardness	Chloride	SO ₄	CN	TKN	Nitrate	Nitrite	As	Ba	Be	Cd	Ca	Cr	Cu	Fe
N9 W31146 Concord Ct.	NS	NS	(250 / 250)	(250 / 250)	(0.2 / 0.2)	NS	(10 / 10)	(1 / 1)	(10 / 10)	(2000 / 2000)	(4 / 4)	(5 / 5)	NS	(100 / 100)	(1300 / 1300)	(300 / 300)
DATE	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
10/30/17	320	342	30	56	<0.0040	<0.52	1.4	<0.040	<0.60	123	<0.38	<0.40	71.3	<2.0	49.6	<59
04/27/18	330	317	25	53	<0.0030	<0.23	1.3	<0.14	<0.60	136	<0.38	<0.40	62.7	<2.0	4.5 J	<59
10/29/18	320	344	25	52	<0.0030	<0.23	1.4	<0.14	<0.60	132	<0.38	<0.40	68.2	<2.0	4.9 J	<59
04/29/19	320	338	26	52	<0.0030	<0.23	1.3	<0.14	<0.60	129	<0.38	<0.40	68.0	<2.0	26.7	<59

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO₄: sulfate

Ba: barium

Cr: chromium

Mn: manganese

Se: selenium

CN: cyanide

Be: beryllium

Cu: copper

Na: sodium

Tl: thallium

TKN: total kjeldahl nitrogen

Cd: cadmium

Fe: iron

Pb: lead

Zn: zinc

As: arsenic

Ca: calcium

Mg: magnesium

Sb: antimony

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

15	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES)								FIELD PARAMETERS			VOCs (EPA MCL / WDNR ES)
	Mg	Mn # (50 / 50)	Na	Pb (15 / 15)	Sb (6 / 6)	Se (50 / 50)	Tl (2 / 2)	Zn (5000 / 5000)	pH	Conductivity	Temp.	Chloromethane (NS / 30)
N9 W31146 Concord Ct.	NS		NS	(15 / 15)	(6 / 6)	(50 / 50)	(2 / 2)	(5000 / 5000)	NS	NS	NS	(NS / 30)
DATE	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	std. Units	umhos/cm	deg. C	ug/L
10/30/17	39.7	<2.2	8.44	2.2	<0.60	<1.0	<0.19	453	7.47	694	11.9	<0.19
04/27/18	38.9	<2.2	7.14	<0.43	<0.60	<1.0	<0.19	13.5	7.59	664	11.3	0.50 J B
10/29/18	42.3	<2.2	8.01	<0.43	<0.60	<1.0	<0.19	6.7 J	7.64	742	8.3	<0.19
04/29/19	40.9	<2.2	8.73	<0.43	<0.60	<1.0	<0.19	44.4	7.70	655	12.4	<0.19

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

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WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273759 Sample Description: 15

DNR License/Well #: 00719/239

Sampled: 04/29/2019 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Field Results										
Color (Field)	CLEAR		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Conductivity (Field)	655	umhos/cm	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
pH (Field)	7.70	S.U.	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Temperature (Field)	12.4	Deg. C	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U	05/01/2019 12:00	05/03/2019 13:54	CLB	EPA 351.2
Nitrate Nitrogen Total	1.3	mg/L	0.12	0.40	1			04/30/2019 16:44	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		04/30/2019 16:44	TMG	EPA 300.0
Total Chloride	26	mg/L	1.0	3.2	1			04/30/2019 16:44	TMG	EPA 300.0
Total Sulfate	52	mg/L	0.80	2.5	1	M		04/30/2019 16:44	TMG	EPA 300.0

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273760	Sample Description: 15	DNR License/Well #: 00719/239	Sampled: 04/29/2019 1110
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Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Alkalinity	320	mg/L	4.0	4.0	1			05/09/2019 15:00	HLB	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	05/10/2019 12:00	05/10/2019 19:24	SAW	EPA 335.4
Metals Results										
Total Barium	129	ug/L	0.70	2.5	1			05/07/2019 14:17	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		05/07/2019 14:17	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		05/07/2019 14:17	NAH	EPA 200.7
Total Calcium	68000	ug/L	31	110	1			05/07/2019 14:17	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		05/07/2019 14:17	NAH	EPA 200.7
Total Copper	26.7	ug/L	3.9	13	1			05/07/2019 14:17	NAH	EPA 200.7
Total Iron	<59	ug/L	59	200	1	U		05/07/2019 14:17	NAH	EPA 200.7
Total Magnesium	40900	ug/L	25	84	1			05/07/2019 14:17	NAH	EPA 200.7
Total Manganese	<2.2	ug/L	2.2	7.3	1	U		05/07/2019 14:17	NAH	EPA 200.7
Total Zinc	44.4	ug/L	2.2	7.3	1			05/07/2019 14:17	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		05/03/2019 12:03	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	05/06/2019 13:30	05/06/2019 18:59	MDS	EPA 200.9

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273760 Sample Description:15

DNR License/Well #: 00719/239 Sampled: 04/29/2019 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Lead	<0.43	ug/L	0.43	1.4	1	U		05/07/2019 14:28	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	05/06/2019 13:30	05/08/2019 11:49	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	05/06/2019 08:45	05/14/2019 12:27	MDS	EPA 200.9
Total Sodium	8.730	mg/L	0.030	0.10	1			05/01/2019 13:30	MDS	EPA 200.7
Total Hardness	338	mg/L	0.18	0.61	1			05/07/2019 14:17	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 11:49	RLD	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 11:49	RLD	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:49	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273760 Sample Description:15

DNR License/Well #: 00719/239 Sampled: 04/29/2019 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:49	RLD	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 11:49	RLD	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:49	RLD	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:49	RLD	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		05/06/2019 11:49	RLD	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 11:49	RLD	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:49	RLD	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 11:49	RLD	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 11:49	RLD	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:49	RLD	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		05/06/2019 11:49	RLD	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		05/06/2019 11:49	RLD	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		05/06/2019 11:49	RLD	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 11:49	RLD	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		05/06/2019 11:49	RLD	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		05/06/2019 11:49	RLD	EPA 524.2
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 11:49	RLD	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 11:49	RLD	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U		05/06/2019 11:49	RLD	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U		05/06/2019 11:49	RLD	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 11:49	RLD	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U		05/06/2019 11:49	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273760 Sample Description:15

DNR License/Well #: 00719/239 Sampled: 04/29/2019 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U		05/06/2019 11:49	RLD	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 11:49	RLD	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 11:49	RLD	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 11:49	RLD	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 11:49	RLD	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U		05/06/2019 11:49	RLD	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U		05/06/2019 11:49	RLD	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 11:49	RLD	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 11:49	RLD	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 11:49	RLD	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U		05/06/2019 11:49	RLD	EPA 524.2

Notes: All LOD/LOQs are adjusted to reflect dilution, percent solids, and any differences in the sample weight / volume as compared to standard amounts. "U" qualifier indicates concentration of analyte was below the detection limit. "J" qualifer indicates an estimated value between the LOD and LOQ.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Brett M. Szymanski
Project Manager
Submitted by: 608-356-2760

<u>Code</u>	<u>Description</u>	<u>QC Qualifiers</u>
B	Analyte detected in the associated Method Blank.	
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	Incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
 Wisconsin (DATCP) Bacteriology ID# 105-289
 Louisiana NELAP (primary) ID# ACC20160002
 Illinois NELAP Lab ID# 200073
 Kansas NELAP Lab ID# E-10368
 Virginia NELAP Lab ID# 460203
 Maryland Lab ID# WI00061
 ISO/IEC 17025-2005 A2LA Cert # 3806.01
 DoD-ELAP A2LA 3806.01
 GA EPD Stipulation ID ACC20160002

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

May 28, 2019

Michael Sitarz
W312 N1055 Fairfield Way
Delafield, WI 53018

Re: April 2019 Private Well Monitoring Results (PW-54)

Dear Mr. Sitarz:

Water samples were collected from your well located at W312 N1055 Fairfield Way on April 29, 2019 as part of the private well monitoring program associated with the closed Delafield Sanitary Transfer and Landfill. The samples were collected by Environmental Sampling Corporation (ESC) personnel and submitted to CT Laboratories, Inc. (WDNR Lab Certification #157066030) for analysis.

The water samples collected from the well were tested for the following semi-annual monitoring parameters: alkalinity, chloride, hardness, sulfate, cyanide, total kjeldahl nitrogen, nitrate, nitrite, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, sodium, lead, antimony, selenium, thallium, zinc, and volatile organic compounds (VOCs). The VOC analysis covers a wide range of compounds that are generally found in household and industrial solvents, degreasers, cleaners, gases and petroleum products. The VOC analysis can detect the presence of more than forty compounds. In addition to the parameters listed above, the sample was tested in the field for pH, temperature, and specific conductance.

The Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) have established groundwater quality standards for the protection of human health and the environment. Contaminant concentrations that are detected at levels less than the EPA Maximum Contaminant Level (MCL) and the WDNR Enforcement Standard (ES) are believed to be safe for a water supply. In general, the federal MCL and the Wisconsin ES levels are the same, though for some substances the Wisconsin ES is lower than the MCL. The EPA and WDNR have also established secondary or "aesthetic" standards for select inorganic parameters. These standards are based on the taste and appearance of the water rather than health effects.

No VOCs were detected at concentrations above the laboratory LOD and therefore, not above an applicable MCL or ES in the samples collected from your well. The concentrations of inorganic parameters were less than drinking water standards.

Mr. Sitarz
May 28, 2019
Page 2

A summary of the water quality results and a copy of the CT Laboratories report are provided with this letter. Should you have any questions concerning our work at the landfill or the water quality results you have received, please feel free to call me at 414-427-5033.

Sincerely,
Environmental Sampling Corporation


Tracy Ipavec
Sr. Environmental Specialist

Attachments

cc: Jason Lowery: WDNR, Madison (electronic copy)
David Buser: WDNR, Milwaukee (electronic copy)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

**DELAFIELD LANDFILL
Private Well Monitoring Data**

54	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)															
	W312 N1055 Fairfield Way	Alkalinity NS	Hardness NS	Chloride (250 / 250)	SO ₄ (250 / 250)	CN (0.2 / 0.2)	TKN NS	Nitrate (10 / 10)	Nitrite (1 / 1)	As (10 / 10)	Ba (2000 / 2000)	Be (4 / 4)	Cd (5 / 5)	Ca NS	Cr (100 / 100)	Cu (1300 / 1300)
DATE	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
10/30/17	340	353	89	52	<0.0040	<0.52	<0.040	<0.040	<0.60	82.3	<0.38	<0.40	79.4	<2.0	9.2 J	<59
04/27/18	360	346	<1.0	53	<0.0030	<0.23	<0.12	<0.14	<0.60	98.4	<0.38	<0.40	73.4	<2.0	11.7 J	81.8 J
10/29/18	190	380	110	55	<0.0030	0.47 J	<0.12	<0.14	<0.60	94.5	<0.38	<0.40	81.4	<2.0	<3.9	74.5 J
04/29/19	360	381	97	56	<0.0030	<0.23	<0.12	<0.14	<0.60	95.6	<0.38	<0.40	82.5	<2.0	348	121 J

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

Environmental Sampling Corporation

**DELAFIELD LANDFILL
Private Well Monitoring Data**

54	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES)								FIELD PARAMETERS			VOCs (EPA MCL / WDNR ES)
	Mg	Mn # (50 / 50)	Na	Pb (15 / 15)	Sb (6 / 6)	Se (50 / 50)	Tl (2 / 2)	Zn (5000 / 5000)	pH	Conductivity	Temp.	Chloromethane (NS / 30)
W312 N1055 Fairfield Way	NS		NS	(15 / 15)	(6 / 6)	(50 / 50)	(2 / 2)	(5000 / 5000)	NS	NS	NS	(NS / 30)
DATE	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	std. Units	umhos/cm	deg. C	ug/L
10/30/17	37.5	8.1	49.1	<0.43	<0.60	<1.0	<0.19	37.1	7.53	882	10.7	<0.19
04/27/18	39.4	8.7	44.0	0.89 J	<0.60	<1.0	<0.19	42.4	7.62	891	11.5	0.50 J B
10/29/18	42.8	9.4	48.4	<0.43	<0.60	<1.0	<0.19	8.8	7.96	939	11.0	<0.19
04/29/19	42.5	8.6	49.8	1.7	<0.60	<1.0	<0.19	241	7.22	905	12.1	<0.19

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273761 Sample Description: 54

DNR License/Well #: 00719/281 Sampled: 04/29/2019 1050

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Field Results										
Color (Field)	CLEAR		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Conductivity (Field)	905	umhos/cm	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
pH (Field)	7.22	S.U.	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Temperature (Field)	12.1	Deg. C	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U	05/01/2019 12:00	05/03/2019 13:55	CLB	EPA 351.2
Nitrate Nitrogen Total	<0.12	mg/L	0.12	0.40	1	U		04/30/2019 17:44	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		04/30/2019 17:44	TMG	EPA 300.0
Total Chloride	97	mg/L	10	32	10			05/01/2019 10:08	TMG	EPA 300.0
Total Sulfate	56	mg/L	0.80	2.5	1			04/30/2019 17:44	TMG	EPA 300.0

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273762	Sample Description: 54	DNR License/Well #: 00719/281	Sampled: 04/29/2019 1050
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Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Alkalinity	360	mg/L	4.0	4.0	1			05/09/2019 15:00	HLB	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	05/10/2019 12:00	05/10/2019 19:27	SAW	EPA 335.4
Metals Results										
Total Barium	95.6	ug/L	0.70	2.5	1			05/07/2019 14:41	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		05/07/2019 14:41	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		05/07/2019 14:41	NAH	EPA 200.7
Total Calcium	82500	ug/L	31	110	1			05/07/2019 14:41	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		05/07/2019 14:41	NAH	EPA 200.7
Total Copper	348	ug/L	3.9	13	1			05/07/2019 14:41	NAH	EPA 200.7
Total Iron	121	ug/L	59	200	1	J		05/07/2019 14:41	NAH	EPA 200.7
Total Magnesium	42500	ug/L	25	84	1			05/07/2019 14:41	NAH	EPA 200.7
Total Manganese	8.6	ug/L	2.2	7.3	1			05/07/2019 14:41	NAH	EPA 200.7
Total Zinc	241	ug/L	2.2	7.3	1			05/07/2019 14:41	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		05/03/2019 12:08	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	05/06/2019 13:30	05/06/2019 19:05	MDS	EPA 200.9

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273762 Sample Description:54

DNR License/Well #: 00719/281 Sampled: 04/29/2019 1050

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Lead	1.7	ug/L	0.43	1.4	1			05/07/2019 14:34	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	05/06/2019 13:30	05/08/2019 11:55	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	05/06/2019 08:45	05/14/2019 12:33	MDS	EPA 200.9
Total Sodium	49.80	mg/L	0.030	0.10	1			05/01/2019 13:32	MDS	EPA 200.7
Total Hardness	381	mg/L	0.18	0.61	1			05/07/2019 14:41	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 12:17	RLD	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 12:17	RLD	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 12:17	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273762 Sample Description:54

DNR License/Well #: 00719/281 Sampled: 04/29/2019 1050

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U	05/06/2019 12:17	12:17	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273762 Sample Description:54

DNR License/Well #: 00719/281 Sampled: 04/29/2019 1050

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U		05/06/2019 12:17	RLD	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 12:17	RLD	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 12:17	RLD	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 12:17	RLD	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 12:17	RLD	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 12:17	RLD	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U		05/06/2019 12:17	RLD	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U		05/06/2019 12:17	RLD	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 12:17	RLD	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 12:17	RLD	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 12:17	RLD	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U		05/06/2019 12:17	RLD	EPA 524.2

Notes: All LOD/LOQs are adjusted to reflect dilution, percent solids, and any differences in the sample weight / volume as compared to standard amounts. "U" qualifier indicates concentration of analyte was below the detection limit. "J" qualifer indicates an estimated value between the LOD and LOQ.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Brett M. Szymanski
Project Manager
Submitted by: 608-356-2760

<u>Code</u>	<u>Description</u>	<u>QC Qualifiers</u>
B	Analyte detected in the associated Method Blank.	
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	Incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
 Wisconsin (DATCP) Bacteriology ID# 105-289
 Louisiana NELAP (primary) ID# ACC20160002
 Illinois NELAP Lab ID# 200073
 Kansas NELAP Lab ID# E-10368
 Virginia NELAP Lab ID# 460203
 Maryland Lab ID# WI00061
 ISO/IEC 17025-2005 A2LA Cert # 3806.01
 DoD-ELAP A2LA 3806.01
 GA EPD Stipulation ID ACC20160002

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

May 28, 2019

Erwin Sulma
W310 N1071 Bunker Hill Tr.
Delafield, WI 53018

Howard and Brenda Lewis
W310 N1054 Bunker Hill Tr.
Delafield, WI 53018

Current Resident
W310 N1055 Bunker Hill Tr.
Delafield, WI 53018

Re: April 2019 Private Well Monitoring Results (LOT 15)

Dear Mr. Sulma, Mr. and Mrs. Lewis, and Current Resident:

Water samples were collected from your shared well on Bunker Hill Trail on April 29, 2019 as part of the private well monitoring program associated with the closed Delafield Sanitary Transfer and Landfill. The samples were collected by Environmental Sampling Corporation (ESC) personnel and submitted to CT Laboratories, Inc. (WDNR Lab Certification #157066030) for analysis.

The water samples collected from the well were tested for the following semi-annual monitoring parameters: alkalinity, chloride, hardness, sulfate, cyanide, total kjeldahl nitrogen, nitrate, nitrite, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, sodium, lead, antimony, selenium, thallium, zinc, and volatile organic compounds (VOCs). The VOC analysis covers a wide range of compounds that are generally found in household and industrial solvents, degreasers, cleaners, gases and petroleum products. The VOC analysis can detect the presence of more than forty compounds. In addition to the parameters listed above, the sample was tested in the field for pH, temperature, and specific conductance.

The Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) have established groundwater quality standards for the protection of human health and the environment. Contaminant concentrations that are detected at levels less than the EPA Maximum Contaminant Level (MCL) and the WDNR Enforcement Standard (ES) are believed to be safe for a water supply. In general, the federal MCL and the Wisconsin ES levels are the same, though for some substances the Wisconsin ES is lower than the MCL. The EPA and WDNR have also established secondary or "aesthetic" standards for select

Mr. Sulma, Mr. and Mrs. Lewis, and Current Resident

May 28, 2019

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inorganic parameters. These standards are based on the taste and appearance of the water rather than health effects.

No VOCs were detected at concentrations above the laboratory LOD and therefore, not above an applicable MCL or ES in the samples collected from your well. The concentrations of inorganic parameters were less than drinking water standards.

A summary of the water quality results and a copy of the CT Laboratories report are provided with this letter. Should you have any questions concerning our work at the landfill or the water quality results you have received, please feel free to call me at 414-427-5033.

Sincerely,
Environmental Sampling Corporation



Tracy Ipavec
Sr. Environmental Specialist

Attachments

cc: Jason Lowery: WDNR, Madison (electronic copy)
David Buser: WDNR, Milwaukee (electronic copy)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

LOT 15 W310 N1054 W310 N1071 Bunker Hill Tr.	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)															
	Alkalinity	Hardness	Chloride	SO ₄	CN	TKN	Nitrate	Nitrite	As	Ba	Be	Cd	Ca	Cr	Cu	Fe
	NS	NS	(250 / 250)	(250 / 250)	(0.2 / 0.2)	NS	(10 / 10)	(1 / 1)	(10 / 10)	(2000 / 2000)	(4 / 4)	(5 / 5)	NS	(100 / 100)	(1300 / 1300)	(300 / 300)
DATE	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
11/01/17	230	211	4.9	27	<0.0040	<0.52	<0.040	<0.040	<0.60	43.5	<0.38	<0.40	49.4	<2.0	96.8	150 J
04/27/18	240	209	3.3	21	<0.0030	0.27 J	<0.12	<0.14	<0.60	51.0	<0.38	<0.40	47.6	<2.0	69.2	179 J
10/29/18	240	219	1.4	19	<0.0030	<0.23	<0.12	<0.14	<0.60	50.4	<0.38	<0.40	50.0	<2.0	<3.9	265
04/29/19	240	226	15	22	<0.0030	0.36 J	<0.12	<0.14	<0.60	47.3	<0.38	<0.40	51.9	<2.0	16.1	285

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

Environmental Sampling Corporation

**DELAFIELD LANDFILL
Private Well Monitoring Data**

LOT 15 W310 N1054 W310 N1071 Bunker Hill Tr.	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES)								FIELD PARAMETERS			VOCs (EPA MCL / WDNR ES)
	Mg	Mn #	Na	Pb	Sb	Se	Tl	Zn	pH	Conductivity	Temp.	Chloromethane
DATE	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	std. Units	umhos/cm	deg. C	ug/L
11/01/17	21.3	5.8 J	5.73	4.3	<0.60	<1.0	<0.19	260	7.10	436	14.3	<0.19
04/27/18	21.9	4.4 J	5.17	6.8	<0.60	<1.0	0.19 J B	262	7.52	406	14.8	0.50 J B
10/29/18	22.9	5.3 J	6.63	0.59 J	<0.60	<1.0	<0.19	261	7.68	429	11.9	<0.19
04/29/19	23.3	4.3 J	5.84	1.8	<0.60	<1.0	<0.19	939	7.17	458	14.4	<0.19

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273763 Sample Description: LOT 15

DNR License/Well #: 00719/382

Sampled: 04/29/2019 1000

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Field Results										
Color (Field)	CLEAR		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Conductivity (Field)	458	umhos/cm	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
pH (Field)	7.17	S.U.	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Temperature (Field)	14.4	Deg. C	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Inorganic Results										
Total Kjeldahl Nitrogen	0.36	mg/L	0.23	0.76	1	J M	05/01/2019 12:00	05/03/2019 14:20	CLB	EPA 351.2
Nitrate Nitrogen Total	<0.12	mg/L	0.12	0.40	1	U		04/30/2019 18:04	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		04/30/2019 18:04	TMG	EPA 300.0
Total Chloride	15	mg/L	1.0	3.2	1			04/30/2019 18:04	TMG	EPA 300.0
Total Sulfate	22	mg/L	0.80	2.5	1			04/30/2019 18:04	TMG	EPA 300.0

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273764	Sample Description: LOT 15	DNR License/Well #: 00719/382	Sampled: 04/29/2019 1000
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Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Alkalinity	240	mg/L	4.0	4.0	1			05/09/2019 15:00	HLB	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	05/10/2019 12:00	05/10/2019 19:31	SAW	EPA 335.4
Metals Results										
Total Barium	47.3	ug/L	0.70	2.5	1			05/07/2019 14:48	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		05/07/2019 14:48	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		05/07/2019 14:48	NAH	EPA 200.7
Total Calcium	51900	ug/L	31	110	1			05/07/2019 14:48	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		05/07/2019 14:48	NAH	EPA 200.7
Total Copper	16.1	ug/L	3.9	13	1			05/07/2019 14:48	NAH	EPA 200.7
Total Iron	285	ug/L	59	200	1			05/07/2019 14:48	NAH	EPA 200.7
Total Magnesium	23300	ug/L	25	84	1			05/07/2019 14:48	NAH	EPA 200.7
Total Manganese	4.3	ug/L	2.2	7.3	1	J		05/07/2019 14:48	NAH	EPA 200.7
Total Zinc	939	ug/L	2.2	7.3	1			05/07/2019 14:48	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		05/03/2019 12:13	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	05/06/2019 13:30	05/06/2019 19:23	MDS	EPA 200.9

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273764 Sample Description: LOT 15

DNR License/Well #: 00719/382 Sampled: 04/29/2019 1000

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Lead	1.8	ug/L	0.43	1.4	1			05/07/2019 14:40	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	05/06/2019 13:30	05/08/2019 12:01	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	05/06/2019 08:45	05/14/2019 12:57	MDS	EPA 200.9
Total Sodium	5.840	mg/L	0.030	0.10	1			05/01/2019 13:40	MDS	EPA 200.7
Total Hardness	226	mg/L	0.18	0.61	1			05/07/2019 14:48	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 14:41	RLD	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 14:41	RLD	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 14:41	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273764 Sample Description: LOT 15

DNR License/Well #: 00719/382 Sampled: 04/29/2019 1000

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 14:41	RLD	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 14:41	RLD	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 14:41	RLD	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 14:41	RLD	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 14:41	RLD	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		05/06/2019 14:41	RLD	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 14:41	RLD	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 14:41	RLD	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 14:41	RLD	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 14:41	RLD	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 14:41	RLD	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		05/06/2019 14:41	RLD	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		05/06/2019 14:41	RLD	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		05/06/2019 14:41	RLD	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 14:41	RLD	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		05/06/2019 14:41	RLD	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 14:41	RLD	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 14:41	RLD	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		05/06/2019 14:41	RLD	EPA 524.2
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 14:41	RLD	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 14:41	RLD	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U		05/06/2019 14:41	RLD	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U		05/06/2019 14:41	RLD	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 14:41	RLD	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 14:41	RLD	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U		05/06/2019 14:41	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273764 Sample Description: LOT 15

DNR License/Well #: 00719/382 Sampled: 04/29/2019 1000

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U	05/06/2019 14:41	05/06/2019 14:41	RLD	EPA 524.2

Notes: All LOD/LOQs are adjusted to reflect dilution, percent solids, and any differences in the sample weight / volume as compared to standard amounts. "U" qualifier indicates concentration of analyte was below the detection limit. "J" qualifer indicates an estimated value between the LOD and LOQ.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Brett M. Szymanski
Project Manager
Submitted by: 608-356-2760

<u>Code</u>	<u>Description</u>	<u>QC Qualifiers</u>
B	Analyte detected in the associated Method Blank.	
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	Incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
 Wisconsin (DATCP) Bacteriology ID# 105-289
 Louisiana NELAP (primary) ID# ACC20160002
 Illinois NELAP Lab ID# 200073
 Kansas NELAP Lab ID# E-10368
 Virginia NELAP Lab ID# 460203
 Maryland Lab ID# WI00061
 ISO/IEC 17025-2005 A2LA Cert # 3806.01
 DoD-ELAP A2LA 3806.01
 GA EPD Stipulation ID ACC20160002

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

May 28, 2019

Chuck and Sharilyn Spiegeloff
1916 Hillside Ct.
Delafield, WI 53018

Re: April 2019 Private Well Monitoring Results (PW-1916)

Dear Mr. and Mrs. Spiegeloff:

Water samples were collected from your well located at 1916 Hillside Court on April 29, 2019 as part of the private well monitoring program associated with the closed Delafield Sanitary Transfer and Landfill. The samples were collected by Environmental Sampling Corporation (ESC) personnel and submitted to CT Laboratories, Inc. (WDNR Lab Certification #157066030) for analysis.

The water samples collected from the well were tested for the following semi-annual monitoring parameters: alkalinity, chloride, hardness, sulfate, cyanide, total kjeldahl nitrogen, nitrate, nitrite, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, sodium, lead, antimony, selenium, thallium, zinc, and volatile organic compounds (VOCs). The VOC analysis covers a wide range of compounds that are generally found in household and industrial solvents, degreasers, cleaners, gases and petroleum products. The VOC analysis can detect the presence of more than forty compounds. In addition to the parameters listed above, the sample was tested in the field for pH, temperature, and specific conductance.

The Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) have established groundwater quality standards for the protection of human health and the environment. Contaminant concentrations that are detected at levels less than the EPA Maximum Contaminant Level (MCL) and the WDNR Enforcement Standard (ES) are believed to be safe for a water supply. In general, the federal MCL and the Wisconsin ES levels are the same, though for some substances the Wisconsin ES is lower than the MCL. The EPA and WDNR have also established secondary or "aesthetic" standards for select inorganic parameters. These standards are based on the taste and appearance of the water rather than health effects.

No VOCs were detected at concentrations above the laboratory LOD and therefore, not above an applicable MCL or ES in the samples collected from your well. The concentrations of inorganic parameters were less than drinking water standards.

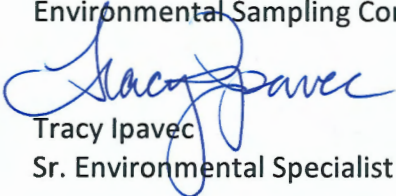
Mr. and Mrs. Spiegeloff

May 28, 2019

Page 2

A summary of the water quality results and a copy of the CT Laboratories report are provided with this letter. Should you have any questions concerning our work at the landfill or the water quality results you have received, please feel free to call me at 414-427-5033.

Sincerely,
Environmental Sampling Corporation



Tracy Ipavec
Sr. Environmental Specialist

Attachments

cc: Jason Lowery: WDNR, Madison (electronic copy)
David Buser: WDNR, Milwaukee (electronic copy)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

1916	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)															
1916 Hillside Ct.	Alkalinity	Hardness	Chloride	SO ₄	CN	TKN	Nitrate	Nitrite	As	Ba	Be	Cd	Ca	Cr	Cu	Fe
DATE	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
10/30/17	330	410	150	29	<0.0040	<0.52	5.3	<0.040	<0.60	62.3	<0.38	<0.40	92.7	<2.0	7.6 J	<59
04/27/18	340	379	<1.0	28	<0.0030	<0.23	4.4	<0.14	<0.60	68.2	<0.38	<0.40	81.4	<2.0	5.2 J	<59
10/29/18	330	439	160	26	<0.0030	<0.23	5.1	<0.14	<0.60	69.8	<0.38	<0.40	96.1	<2.0	4.2 J	<59
04/29/19	350	422	150	26	<0.0030	<0.23	4.7	<0.14	<0.60	68.3	<0.38	<0.40	93.8	<2.0	66.2	<59

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

J=Estimated concentration below laboratory quantitation level.

B=Analyte detected in the associated Method Blank.

EPA MCL: Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL)

EPA SMCL: Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level (SMCL)

WDNR ES: Wisconsin Department of Natural Resources (WDNR) Enforcement Standard (ES)

EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590 = Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO ₄ : sulfate	Ba: barium	Cr: chromium	Mn: manganese	Se: selenium
CN: cyanide	Be: beryllium	Cu: copper	Na: sodium	Tl: thallium
TKN: total kjeldahl nitrogen	Cd: cadmium	Fe: iron	Pb: lead	Zn: zinc
As: arsenic	Ca: calcium	Mg: magnesium	Sb: antimony	

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

1916 1916 Hillside Ct.	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES)								FIELD PARAMETERS			VOCs (EPA MCL / WDNR ES)
	Mg NS	Mn # (50 / 50)	Na NS	Pb (15 / 15)	Sb (6 / 6)	Se (50 / 50)	Tl (2 / 2)	Zn (5000 / 5000)	pH NS	Conductivity NS	Temp. NS	Chloromethane (NS / 30)
DATE	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	std. Units	umhos/cm	deg. C	ug/L
10/30/17	43.3	<2.2	54.3	<0.43	<0.60	<1.0	<0.19	11.4	7.35	990	10.8	<0.19
04/27/18	42.7	<2.2	47.2	0.65 J	<0.60	<1.0	0.23 J	18.2	7.38	965	10.7	0.35 J B
10/29/18	48.3	<2.2	65.1	<0.43	<0.60	<1.0	0.30 J	15.3	7.01	1,102	10.4	<0.19
04/29/19	45.7	<2.2	67.1	5.1	<0.60	<1.0	0.24 J	24.8	7.46	994	12.0	<0.19

Notes:

Drinking water samples are unfiltered.

mg/L = milligrams per liter

ug/L = micrograms per liter

NS = no standard established

s.u. = standard units

-Manganese has NR140 standards for both Public Welfare (50 ug/L) and Public Health (300 ug/L).

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EPA MCL Standards / WDNR NR140 Public Health Standards: cyanide, nitrate, nitrite, arsenic, barium, beryllium, cadmium, chromium, copper, lead, antimony, selenium, thallium, and VOC's.

590

= Indicates an MCL, SMCL, or ES exceedance

Analyte abbreviations:

SO₄: sulfate

Ba: barium

Cr: chromium

Mn: manganese

Se: selenium

CN: cyanide

Be: beryllium

Cu: copper

Na: sodium

Tl: thallium

TKN: total kjeldahl nitrogen

Cd: cadmium

Fe: iron

Pb: lead

Zn: zinc

As: arsenic

Ca: calcium

Mg: magnesium

Sb: antimony

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273765 Sample Description: 1916

DNR License/Well #: 00719/386

Sampled: 04/29/2019 1135

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Field Results										
Color (Field)	CLEAR		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Conductivity (Field)	994	umhos/cm	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
pH (Field)	7.46	S.U.	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Temperature (Field)	12.0	Deg. C	N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			04/29/2019 00:00	SUB	FIELD
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U	05/01/2019 12:00	05/03/2019 14:23	CLB	EPA 351.2
Nitrate Nitrogen Total	4.7	mg/L	0.12	0.40	1			04/30/2019 18:24	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		04/30/2019 18:24	TMG	EPA 300.0
Total Chloride	150	mg/L	10	32	10			04/30/2019 19:24	TMG	EPA 300.0
Total Sulfate	26	mg/L	0.80	2.5	1			04/30/2019 18:24	TMG	EPA 300.0

ANALYTICAL REPORT

ENVIRONMENTAL SAMPLING CORP.
 FRANK PERUGINI
 W125 S9808 NORTH CAPE ROAD
 MUSKEGO, WI 53150

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 04-2019
 Folder #: 144664
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 05/21/2019
 Date Received: 04/30/2019
 Reprint Date: 05/21/2019

CT LAB#: 273766	Sample Description: 1916	DNR License/Well #: 00719/386	Sampled: 04/29/2019 1135
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Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Alkalinity	350	mg/L	4.0	4.0	1			05/09/2019 15:00	HLB	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	05/10/2019 12:00	05/10/2019 19:34	SAW	EPA 335.4
Metals Results										
Total Barium	68.3	ug/L	0.70	2.5	1			05/07/2019 14:55	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		05/07/2019 14:55	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		05/07/2019 14:55	NAH	EPA 200.7
Total Calcium	93800	ug/L	31	110	1			05/07/2019 14:55	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		05/07/2019 14:55	NAH	EPA 200.7
Total Copper	66.2	ug/L	3.9	13	1			05/07/2019 14:55	NAH	EPA 200.7
Total Iron	<59	ug/L	59	200	1	U		05/07/2019 14:55	NAH	EPA 200.7
Total Magnesium	45700	ug/L	25	84	1			05/07/2019 14:55	NAH	EPA 200.7
Total Manganese	<2.2	ug/L	2.2	7.3	1	U		05/07/2019 14:55	NAH	EPA 200.7
Total Zinc	24.8	ug/L	2.2	7.3	1			05/07/2019 14:55	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		05/03/2019 12:17	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	05/06/2019 13:30	05/06/2019 19:29	MDS	EPA 200.9

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273766 Sample Description:1916

DNR License/Well #: 00719/386 Sampled: 04/29/2019 1135

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Lead	5.1	ug/L	0.43	1.4	1			05/07/2019 14:46	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	05/06/2019 13:30	05/08/2019 12:07	MDS	EPA 200.9
Total Thallium	0.24	ug/L	0.19	0.61	1	J	05/06/2019 08:45	05/14/2019 13:03	MDS	EPA 200.9
Total Sodium	67.10	mg/L	0.030	0.10	1			05/01/2019 13:42	MDS	EPA 200.7
Total Hardness	422	mg/L	0.18	0.61	1			05/07/2019 14:55	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		05/06/2019 15:10	RLD	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 15:10	RLD	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 15:10	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273766 Sample Description:1916

DNR License/Well #: 00719/386 Sampled: 04/29/2019 1135

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 15:10	RLD	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 15:10	RLD	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 15:10	RLD	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 15:10	RLD	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		05/06/2019 15:10	RLD	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		05/06/2019 15:10	RLD	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 15:10	RLD	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 15:10	RLD	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 15:10	RLD	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 15:10	RLD	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		05/06/2019 15:10	RLD	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		05/06/2019 15:10	RLD	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		05/06/2019 15:10	RLD	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		05/06/2019 15:10	RLD	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		05/06/2019 15:10	RLD	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		05/06/2019 15:10	RLD	EPA 524.2
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U		05/06/2019 15:10	RLD	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U		05/06/2019 15:10	RLD	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U		05/06/2019 15:10	RLD	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U		05/06/2019 15:10	RLD	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 15:10	RLD	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U		05/06/2019 15:10	RLD	EPA 524.2

Unless specifically stated to the contrary, soil/sediment/sludge sample results/LOD/LOQ/RLs were reported on a Dry Weight Basis

CT LAB#: 273766 Sample Description:1916

DNR License/Well #: 00719/386 Sampled: 04/29/2019 1135

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U		05/06/2019 15:10	RLD	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U		05/06/2019 15:10	RLD	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 15:10	RLD	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U		05/06/2019 15:10	RLD	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U		05/06/2019 15:10	RLD	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U		05/06/2019 15:10	RLD	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U		05/06/2019 15:10	RLD	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U		05/06/2019 15:10	RLD	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U		05/06/2019 15:10	RLD	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U		05/06/2019 15:10	RLD	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U		05/06/2019 15:10	RLD	EPA 524.2

Notes: All LOD/LOQs are adjusted to reflect dilution, percent solids, and any differences in the sample weight / volume as compared to standard amounts. "U" qualifier indicates concentration of analyte was below the detection limit. "J" qualifer indicates an estimated value between the LOD and LOQ.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Brett M. Szymanski
Project Manager
Submitted by: 608-356-2760

<u>Code</u>	<u>Description</u>	<u>QC Qualifiers</u>
B	Analyte detected in the associated Method Blank.	
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	Incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
 Wisconsin (DATCP) Bacteriology ID# 105-289
 Louisiana NELAP (primary) ID# ACC20160002
 Illinois NELAP Lab ID# 200073
 Kansas NELAP Lab ID# E-10368
 Virginia NELAP Lab ID# 460203
 Maryland Lab ID# WI00061
 ISO/IEC 17025-2005 A2LA Cert # 3806.01
 DoD-ELAP A2LA 3806.01
 GA EPD Stipulation ID ACC20160002