

ENVIRONMENTAL SAMPLING CORPORATION

Dedicated to Environmental Monitoring, Science & Technology

December 6, 2018

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

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

Re: October 2018 Private Well Monitoring Results (LOT 15)

Dear Mr. Sulma and Mr. and Mrs. Lewis:

Water samples were collected from your shared well on Bunker Hill Trail on October 29, 2018 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.

Mr. Sulma and Mr. Van Der Bunt

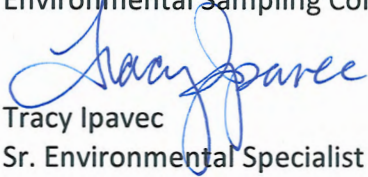
December 6, 2018

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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)
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

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	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES)								FIELD PARAMETERS			VOCs (EPA MCL / WDNR ES)
W310 N1054 W310 N1071 Bunker Hill Tr.	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

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)

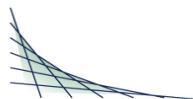
EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

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

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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	



REVISED
ANALYTICAL REPORT

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202511 Sample Description: LOT 15

DNR License/Well #: 0719/382

Sampled: 10/29/2018 1140

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U	10/31/2018 09:00	11/02/2018 14:06	MEZ	EPA 351.2
Nitrate Nitrogen Total	<0.12	mg/L	0.12	0.40	1	U		10/30/2018 17:58	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		10/30/2018 17:58	TMG	EPA 300.0
Total Chloride	1.4	mg/L	1.0	3.2	1	J		10/30/2018 17:58	TMG	EPA 300.0
Total Sulfate	19	mg/L	0.80	2.5	1			10/30/2018 17:58	TMG	EPA 300.0

**REVISED
 ANALYTICAL REPORT**

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202512 Sample Description: LOT 15

DNR License/Well #: 0719/382

Sampled: 10/29/2018 1140

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			10/29/2018 00:00	SUB	FIELD
Conductivity (Field)	429	umhos/cm	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
pH (Field)	7.68	S.U.	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Temperature (Field)	11.9	Deg. C	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Inorganic Results										
Alkalinity	240	mg/L	4.0	4.0	1			11/09/2018 15:15	MEZ	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	11/05/2018 10:00	11/05/2018 12:55	LJS	EPA 335.4
Metals Results										
Total Barium	50.4	ug/L	0.70	2.5	1			10/31/2018 19:30	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		10/31/2018 19:30	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		10/31/2018 19:30	NAH	EPA 200.7
Total Calcium	50000	ug/L	31	110	1			10/31/2018 19:30	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		10/31/2018 19:30	NAH	EPA 200.7

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

CT LAB#: 202512 Sample Description: LOT 15

DNR License/Well #: 0719/382

Sampled: 10/29/2018 1140

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Copper	<3.9	ug/L	3.9	13	1	U		10/31/2018 19:30	NAH	EPA 200.7
Total Iron	265	ug/L	59	200	1			10/31/2018 19:30	NAH	EPA 200.7
Total Magnesium	22900	ug/L	25	84	1			10/31/2018 19:30	NAH	EPA 200.7
Total Manganese	5.3	ug/L	2.2	7.3	1	J		10/31/2018 19:30	NAH	EPA 200.7
Total Zinc	261	ug/L	2.2	7.3	1			10/31/2018 19:30	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		11/07/2018 12:31	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	11/01/2018 09:00	11/01/2018 16:19	MDS	EPA 200.9
Total Lead	0.59	ug/L	0.43	1.4	1	J		11/01/2018 11:51	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	11/01/2018 09:00	11/02/2018 10:39	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	11/01/2018 09:00	11/07/2018 17:08	MDS	EPA 200.9
Total Sodium	6.630	mg/L	0.030	0.10	1			10/31/2018 11:40	MDS	EPA 200.7
Total Hardness	219	mg/L	0.18	0.61	1			10/31/2018 19:30	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:50	AGK	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#: 202512 Sample Description: LOT 15

DNR License/Well #: 0719/382

Sampled: 10/29/2018 1140

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:50	AGK	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 20:50	AGK	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:50	AGK	EPA 524.2
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:50	AGK	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 20:50	AGK	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:50	AGK	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:50	AGK	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		11/04/2018 20:50	AGK	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:50	AGK	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:50	AGK	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 20:50	AGK	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 20:50	AGK	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:50	AGK	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		11/04/2018 20:50	AGK	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		11/04/2018 20:50	AGK	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		11/04/2018 20:50	AGK	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 20:50	AGK	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		11/04/2018 20:50	AGK	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		11/04/2018 20:50	AGK	EPA 524.2

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CT LAB#: 202512 Sample Description: LOT 15

DNR License/Well #: 0719/382

Sampled: 10/29/2018 1140

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:50	AGK	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 20:50	AGK	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U		11/04/2018 20:50	AGK	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U		11/04/2018 20:50	AGK	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U		11/04/2018 20:50	AGK	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U		11/04/2018 20:50	AGK	EPA 524.2
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U		11/04/2018 20:50	AGK	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U		11/04/2018 20:50	AGK	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U		11/04/2018 20:50	AGK	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 20:50	AGK	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 20:50	AGK	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U		11/04/2018 20:50	AGK	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U		11/04/2018 20:50	AGK	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 20:50	AGK	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:50	AGK	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U		11/04/2018 20:50	AGK	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U		11/04/2018 20:50	AGK	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" qualifier 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.

Eric T. Korthals
 Project Manager
 Submitted by: 608-356-2760

Reason for Revis corrected field data temperature on NR2B

<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

December 6, 2018

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

Re: October 2018 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 October 29, 2018 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

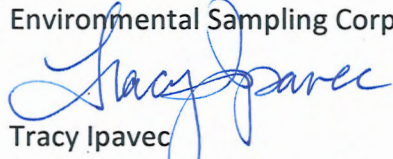
December 6, 2018

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)
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

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 / 30)
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

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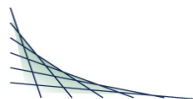
EPA SMCL Standards / WDNR NR140 Public Welfare Standards: chloride, iron, manganese, sulfate, and zinc.

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	



REVISED
ANALYTICAL REPORT

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202504 Sample Description: 11

DNR License/Well #: 0719/235

Sampled: 10/29/2018 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Total Kjeldahl Nitrogen	0.31	mg/L	0.23	0.76	1	J	10/31/2018 09:00	11/02/2018 14:00	MEZ	EPA 351.2
Nitrate Nitrogen Total	3.3	mg/L	0.12	0.40	1			10/30/2018 16:58	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		10/30/2018 16:58	TMG	EPA 300.0
Total Chloride	120	mg/L	10	32	10			10/31/2018 09:08	TMG	EPA 300.0
Total Sulfate	18	mg/L	0.80	2.5	1			10/30/2018 16:58	TMG	EPA 300.0

REVISED
ANALYTICAL REPORT

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202506 Sample Description: 11

DNR License/Well #: 0719/235

Sampled: 10/29/2018 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			10/29/2018 00:00	SUB	FIELD
Conductivity (Field)	983	umhos/cm	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
pH (Field)	7.50	S.U.	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Temperature (Field)	11.3	Deg. C	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Inorganic Results										
Alkalinity	360	mg/L	4.0	4.0	1			11/09/2018 15:15	MEZ	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	11/05/2018 10:00	11/05/2018 12:38	LJS	EPA 335.4
Metals Results										
Total Barium	77.5	ug/L	0.70	2.5	1			10/31/2018 19:06	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		10/31/2018 19:06	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		10/31/2018 19:06	NAH	EPA 200.7
Total Calcium	85400	ug/L	31	110	1			10/31/2018 19:06	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		10/31/2018 19:06	NAH	EPA 200.7

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

CT LAB#: 202506 Sample Description:11

DNR License/Well #: 0719/235

Sampled: 10/29/2018 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Copper	<3.9	ug/L	3.9	13	1	U		10/31/2018 19:06	NAH	EPA 200.7
Total Iron	<59	ug/L	59	200	1	U		10/31/2018 19:06	NAH	EPA 200.7
Total Magnesium	41100	ug/L	25	84	1			10/31/2018 19:06	NAH	EPA 200.7
Total Manganese	4.8	ug/L	2.2	7.3	1	J		10/31/2018 19:06	NAH	EPA 200.7
Total Zinc	<2.2	ug/L	2.2	7.3	1	U		10/31/2018 19:06	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		11/07/2018 12:12	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	11/01/2018 09:00	11/01/2018 15:49	MDS	EPA 200.9
Total Lead	<0.43	ug/L	0.43	1.4	1	U		11/01/2018 11:29	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	11/01/2018 09:00	11/02/2018 10:22	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	11/01/2018 09:00	11/07/2018 16:44	MDS	EPA 200.9
Total Sodium	63.30	mg/L	0.030	0.10	1			10/31/2018 11:19	MDS	EPA 200.7
Total Hardness	382	mg/L	0.18	0.61	1			10/31/2018 19:06	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 18:46	AGK	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#: 202506 Sample Description:11

DNR License/Well #: 0719/235

Sampled: 10/29/2018 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 18:46	AGK	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 18:46	AGK	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 18:46	AGK	EPA 524.2
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 18:46	AGK	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 18:46	AGK	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 18:46	AGK	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 18:46	AGK	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 18:46	AGK	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		11/04/2018 18:46	AGK	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 18:46	AGK	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 18:46	AGK	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 18:46	AGK	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 18:46	AGK	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 18:46	AGK	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		11/04/2018 18:46	AGK	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		11/04/2018 18:46	AGK	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		11/04/2018 18:46	AGK	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 18:46	AGK	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		11/04/2018 18:46	AGK	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 18:46	AGK	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 18:46	AGK	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		11/04/2018 18:46	AGK	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#: 202506 Sample Description:11

DNR License/Well #: 0719/235

Sampled: 10/29/2018 1110

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U	11/04/2018 18:46	11/04/2018 18:46	AGK	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" qualifier 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.

Eric T. Korthals
 Project Manager
 Submitted by: 608-356-2760

Reason for Revis corrected field data temperature on NR2B

<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

December 6, 2018

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

Re: October 2018 Private Well Monitoring Results (PW-13)

Dear Mr. Gronewold:

Water samples were collected from your well located at W311 N1052 Fairfield Way on October 30, 2018 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.

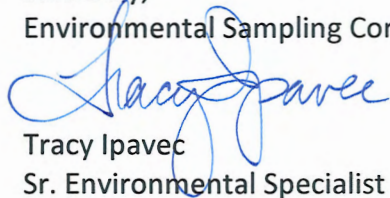
The water samples collected from the well were tested for the following semi-annual monitoring parameters: alkalinity, chloride, hardness, sulfate, cyanide, total kjeldahl nitrogen, nitrate, nitrite, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, sodium, lead, 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.

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)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

DELAFIELD LANDFILL
Private Well Monitoring Data

13	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)																
	W311 N1052 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)	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	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	

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						NS	NS	NS	
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

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Analyte abbreviations:

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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 #:
 Folder #: 140712
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 11/01/2018
 Reprint Date: 12/05/2018

CT LAB#: 203713 Sample Description: P.W.-13

DNR License/Well #: 0719/237

Sampled: 10/30/2018 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U M	11/07/2018 14:00	11/09/2018 11:46	LJS	EPA 351.2
Nitrate Nitrogen Total	0.56	mg/L	0.12	0.40	1			11/01/2018 10:46	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		11/01/2018 10:46	TMG	EPA 300.0
Total Chloride	16	mg/L	1.0	3.2	1			11/01/2018 10:46	TMG	EPA 300.0
Total Sulfate	34	mg/L	0.80	2.5	1	M		11/01/2018 10:46	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 #:
 Folder #: 140712
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 11/01/2018
 Reprint Date: 11/19/2018

CT LAB#: 203714 Sample Description: P.W.-13

DNR License/Well #: 0719/237

Sampled: 10/30/2018 1045

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			10/30/2018 00:00	SUB	FIELD
Conductivity (Field)	409	umhos/cm	N/A	N/A	1			10/30/2018 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			10/30/2018 00:00	SUB	FIELD
pH (Field)	7.19	S.U.	N/A	N/A	1			10/30/2018 00:00	SUB	FIELD
Temperature (Field)	12.1	Deg. C	N/A	N/A	1			10/30/2018 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			10/30/2018 00:00	SUB	FIELD
Inorganic Results										
Alkalinity	300	mg/L	4.0	4.0	1			11/09/2018 15:15	MEZ	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	11/05/2018 10:00	11/05/2018 13:23	LJS	EPA 335.4
Metals Results										
Total Barium	110	ug/L	0.70	2.5	1			11/06/2018 20:27	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		11/06/2018 20:27	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		11/06/2018 20:27	NAH	EPA 200.7
Total Calcium	65800	ug/L	31	110	1			11/06/2018 20:27	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		11/06/2018 20:27	NAH	EPA 200.7

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

CT LAB#: 203714 Sample Description:P.W.-13

DNR License/Well #: 0719/237

Sampled: 10/30/2018 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Copper	9.0	ug/L	3.9	13	1	J		11/06/2018 20:27	NAH	EPA 200.7
Total Iron	69.4	ug/L	59	200	1	J		11/06/2018 20:27	NAH	EPA 200.7
Total Magnesium	43300	ug/L	25	84	1			11/06/2018 20:27	NAH	EPA 200.7
Total Manganese	<2.2	ug/L	2.2	7.3	1	U		11/06/2018 20:27	NAH	EPA 200.7
Total Zinc	<2.2	ug/L	2.2	7.3	1	U		11/06/2018 20:27	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		11/07/2018 12:56	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	11/05/2018 12:30	11/06/2018 09:28	MDS	EPA 200.9
Total Lead	<0.43	ug/L	0.43	1.4	1	U		11/08/2018 09:45	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	11/05/2018 12:30	11/06/2018 14:36	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U M	11/06/2018 09:30	11/08/2018 07:34	MDS	EPA 200.9
Total Sodium	6.830	mg/L	0.030	0.10	1			11/05/2018 11:00	MDS	EPA 200.7
Total Hardness	343	mg/L	0.18	0.61	1			11/06/2018 20:27	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:52	AGK	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#: 203714 Sample Description:P.W.-13

DNR License/Well #: 0719/237

Sampled: 10/30/2018 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:52	AGK	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 21:52	AGK	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:52	AGK	EPA 524.2
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:52	AGK	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:52	AGK	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 21:52	AGK	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:52	AGK	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:52	AGK	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		11/04/2018 21:52	AGK	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:52	AGK	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:52	AGK	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 21:52	AGK	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 21:52	AGK	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:52	AGK	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		11/04/2018 21:52	AGK	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		11/04/2018 21:52	AGK	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		11/04/2018 21:52	AGK	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 21:52	AGK	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		11/04/2018 21:52	AGK	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:52	AGK	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:52	AGK	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		11/04/2018 21:52	AGK	EPA 524.2

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CT LAB#: 203714 Sample Description:P.W.-13

DNR License/Well #: 0719/237

Sampled: 10/30/2018 1045

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U	11/04/2018 21:52	11/04/2018 21:52	AGK	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

December 6, 2018

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

Re: October 2018 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 October 29, 2018 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
December 6, 2018
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)
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

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						NS	NS	NS	
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

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 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

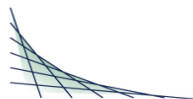
Zn: zinc

As: arsenic

Ca: calcium

Mg: magnesium

Sb: antimony



REVISED
ANALYTICAL REPORT

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202507 Sample Description: 15

DNR License/Well #: 0719/239

Sampled: 10/29/2018 1245

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U	10/31/2018 09:00	11/02/2018 14:01	MEZ	EPA 351.2
Nitrate Nitrogen Total	1.4	mg/L	0.12	0.40	1			10/30/2018 17:18	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		10/30/2018 17:18	TMG	EPA 300.0
Total Chloride	25	mg/L	1.0	3.2	1			10/30/2018 17:18	TMG	EPA 300.0
Total Sulfate	52	mg/L	0.80	2.5	1			10/30/2018 17:18	TMG	EPA 300.0

REVISED
ANALYTICAL REPORT

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202508 Sample Description: 15

DNR License/Well #: 0719/239

Sampled: 10/29/2018 1245

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			10/29/2018 00:00	SUB	FIELD
Conductivity (Field)	742	umhos/cm	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
pH (Field)	7.64	S.U.	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Temperature (Field)	8.3	Deg. C	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Inorganic Results										
Alkalinity	320	mg/L	4.0	4.0	1			11/09/2018 15:15	MEZ	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	11/05/2018 10:00	11/05/2018 12:48	LJS	EPA 335.4
Metals Results										
Total Barium	132	ug/L	0.70	2.5	1			10/31/2018 19:14	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		10/31/2018 19:14	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		10/31/2018 19:14	NAH	EPA 200.7
Total Calcium	68200	ug/L	31	110	1			10/31/2018 19:14	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		10/31/2018 19:14	NAH	EPA 200.7

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

CT LAB#: 202508 Sample Description:15

DNR License/Well #: 0719/239

Sampled: 10/29/2018 1245

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Copper	4.9	ug/L	3.9	13	1	J		10/31/2018 19:14	NAH	EPA 200.7
Total Iron	<59	ug/L	59	200	1	U		10/31/2018 19:14	NAH	EPA 200.7
Total Magnesium	42300	ug/L	25	84	1			10/31/2018 19:14	NAH	EPA 200.7
Total Manganese	<2.2	ug/L	2.2	7.3	1	U		10/31/2018 19:14	NAH	EPA 200.7
Total Zinc	6.7	ug/L	2.2	7.3	1	J		10/31/2018 19:14	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		11/07/2018 12:21	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	11/01/2018 09:00	11/01/2018 15:55	MDS	EPA 200.9
Total Lead	<0.43	ug/L	0.43	1.4	1	U		11/01/2018 11:40	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	11/01/2018 09:00	11/02/2018 10:27	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	11/01/2018 09:00	11/07/2018 16:56	MDS	EPA 200.9
Total Sodium	8.010	mg/L	0.030	0.10	1			10/31/2018 11:34	MDS	EPA 200.7
Total Hardness	344	mg/L	0.18	0.61	1			10/31/2018 19:14	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 19:48	AGK	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#: 202508 Sample Description:15

DNR License/Well #: 0719/239

Sampled: 10/29/2018 1245

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 19:48	AGK	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 19:48	AGK	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 19:48	AGK	EPA 524.2
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 19:48	AGK	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 19:48	AGK	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 19:48	AGK	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 19:48	AGK	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 19:48	AGK	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		11/04/2018 19:48	AGK	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 19:48	AGK	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 19:48	AGK	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 19:48	AGK	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 19:48	AGK	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 19:48	AGK	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		11/04/2018 19:48	AGK	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		11/04/2018 19:48	AGK	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		11/04/2018 19:48	AGK	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 19:48	AGK	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		11/04/2018 19:48	AGK	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 19:48	AGK	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 19:48	AGK	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		11/04/2018 19:48	AGK	EPA 524.2

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CT LAB#: 202508 Sample Description:15

DNR License/Well #: 0719/239

Sampled: 10/29/2018 1245

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U	11/04/2018 19:48	11/04/2018 19:48	AGK	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" qualifier 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.

Eric T. Korthals
 Project Manager
 Submitted by: 608-356-2760

Reason for Revis corrected field data temperature on NR2B

<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

December 6, 2018

Michael Sitarz
W312 N1055 Fairfield Way
Delafield, WI 53018

Re: October 2018 Private Well Monitoring Results (PW-54)

Dear Mr. Sitarz:

Water samples were collected from your well located at W312 N1055 Fairfield Way on October 29, 2018 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.

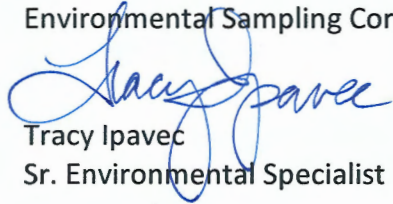
The Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) have established groundwater quality standards for the protection of human health and the environment. Contaminant concentrations that are detected at levels less than the EPA Maximum Contaminant Level (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
December 6, 2018
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)
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

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						NS	NS	NS	
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

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	

**REVISED
 ANALYTICAL REPORT**

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202509	Sample Description: 54	DNR License/Well #: 0719/281	Sampled: 10/29/2018 1220
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Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Total Kjeldahl Nitrogen	0.47	mg/L	0.23	0.76	1	J	10/31/2018 09:00	11/02/2018 14:02	MEZ	EPA 351.2
Nitrate Nitrogen Total	<0.12	mg/L	0.12	0.40	1	U		10/30/2018 17:38	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		10/30/2018 17:38	TMG	EPA 300.0
Total Chloride	110	mg/L	10	32	10			10/31/2018 09:28	TMG	EPA 300.0
Total Sulfate	55	mg/L	0.80	2.5	1			10/30/2018 17:38	TMG	EPA 300.0

**REVISED
 ANALYTICAL REPORT**

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202510 Sample Description: 54

DNR License/Well #: 0719/281

Sampled: 10/29/2018 1220

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			10/29/2018 00:00	SUB	FIELD
Conductivity (Field)	939	umhos/cm	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Odor (Field)	SULFUR		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
pH (Field)	7.96	S.U.	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Temperature (Field)	11.0	Deg. C	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Inorganic Results										
Alkalinity	190	mg/L	4.0	4.0	1			11/09/2018 15:15	MEZ	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	11/05/2018 10:00	11/05/2018 12:52	LJS	EPA 335.4
Metals Results										
Total Barium	94.5	ug/L	0.70	2.5	1			10/31/2018 19:22	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		10/31/2018 19:22	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		10/31/2018 19:22	NAH	EPA 200.7
Total Calcium	81400	ug/L	31	110	1			10/31/2018 19:22	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		10/31/2018 19:22	NAH	EPA 200.7

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

CT LAB#: 202510 Sample Description:54

DNR License/Well #: 0719/281

Sampled: 10/29/2018 1220

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Copper	<3.9	ug/L	3.9	13	1	U		10/31/2018 19:22	NAH	EPA 200.7
Total Iron	74.5	ug/L	59	200	1	J		10/31/2018 19:22	NAH	EPA 200.7
Total Magnesium	42800	ug/L	25	84	1			10/31/2018 19:22	NAH	EPA 200.7
Total Manganese	9.4	ug/L	2.2	7.3	1			10/31/2018 19:22	NAH	EPA 200.7
Total Zinc	8.8	ug/L	2.2	7.3	1			10/31/2018 19:22	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		11/07/2018 12:26	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	11/01/2018 09:00	11/01/2018 16:13	MDS	EPA 200.9
Total Lead	<0.43	ug/L	0.43	1.4	1	U		11/01/2018 11:46	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	11/01/2018 09:00	11/02/2018 10:33	MDS	EPA 200.9
Total Thallium	<0.19	ug/L	0.19	0.61	1	U	11/01/2018 09:00	11/07/2018 17:02	MDS	EPA 200.9
Total Sodium	48.40	mg/L	0.030	0.10	1			10/31/2018 11:37	MDS	EPA 200.7
Total Hardness	380	mg/L	0.18	0.61	1			10/31/2018 19:22	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:19	AGK	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#: 202510 Sample Description:54

DNR License/Well #: 0719/281

Sampled: 10/29/2018 1220

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 20:19	AGK	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 20:19	AGK	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:19	AGK	EPA 524.2
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:19	AGK	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 20:19	AGK	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:19	AGK	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:19	AGK	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		11/04/2018 20:19	AGK	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 20:19	AGK	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:19	AGK	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 20:19	AGK	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 20:19	AGK	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:19	AGK	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		11/04/2018 20:19	AGK	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		11/04/2018 20:19	AGK	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		11/04/2018 20:19	AGK	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 20:19	AGK	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		11/04/2018 20:19	AGK	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		11/04/2018 20:19	AGK	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#: 202510 Sample Description:54

DNR License/Well #: 0719/281

Sampled: 10/29/2018 1220

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 20:19	AGK	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 20:19	AGK	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U		11/04/2018 20:19	AGK	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U		11/04/2018 20:19	AGK	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U		11/04/2018 20:19	AGK	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U		11/04/2018 20:19	AGK	EPA 524.2
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U		11/04/2018 20:19	AGK	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U		11/04/2018 20:19	AGK	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U		11/04/2018 20:19	AGK	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 20:19	AGK	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 20:19	AGK	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U		11/04/2018 20:19	AGK	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U		11/04/2018 20:19	AGK	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 20:19	AGK	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 20:19	AGK	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U		11/04/2018 20:19	AGK	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U		11/04/2018 20:19	AGK	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" qualifier 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.

Eric T. Korthals
 Project Manager
 Submitted by: 608-356-2760

Reason for Revis corrected field data temperature on NR2B

<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

December 6, 2018

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

Re: October 2018 Private Well Monitoring Results (PW-1916)

Dear Mr. and Mrs. Spiegeloff:

Water samples were collected from your well located at 1916 Hillside Court on October 29, 2018 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

December 6, 2018

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)
Frank Perugini: ESC (electronic copy)

Environmental Sampling Corporation

**DELAFIELD LANDFILL
Private Well Monitoring Data**

1916 1916 Hillside Ct.	INORGANIC PARAMETERS (EPA MCL or SMCL / WDNR ES or S)															
	Alkalinity NS mg/L	Hardness NS mg/L	Chloride (250 / 250) mg/L	SO ₄ (250 / 250) mg/L	CN (0.2 / 0.2) mg/L	TKN NS mg/L	Nitrate (10 / 10) mg/L	Nitrite (1 / 1) mg/L	As (10 / 10) ug/L	Ba (2000 / 2000) ug/L	Be (4 / 4) ug/L	Cd (5 / 5) ug/L	Ca NS mg/L	Cr (100 / 100) ug/L	Cu (1300 / 1300) ug/L	Fe (300 / 300) ug/L
DATE																
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

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 mg/L	Mn # (50 / 50) ug/L	Na NS mg/L	Pb (15 / 15) ug/L	Sb (6 / 6) ug/L	Se (50 / 50) ug/L	Tl (2 / 2) ug/L	Zn (5000 / 5000) ug/L	pH NS std. Units	Conductivity NS umhos/cm	Temp. NS deg. C	Chloromethane (NS / 30) ug/L
DATE												
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

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

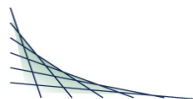
Zn: zinc

As: arsenic

Ca: calcium

Mg: magnesium

Sb: antimony



REVISED
ANALYTICAL REPORT

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 2
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202513 Sample Description: 1916

DNR License/Well #: 0719/383

Sampled: 10/29/2018 1105

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results										
Total Kjeldahl Nitrogen	<0.23	mg/L	0.23	0.76	1	U	10/31/2018 09:00	11/02/2018 14:07	MEZ	EPA 351.2
Nitrate Nitrogen Total	5.1	mg/L	0.12	0.40	1			10/30/2018 18:18	TMG	EPA 300.0
Nitrite Nitrogen Total	<0.14	mg/L	0.14	0.48	1	U		10/30/2018 18:18	TMG	EPA 300.0
Total Chloride	160	mg/L	10	32	10			10/31/2018 09:48	TMG	EPA 300.0
Total Sulfate	26	mg/L	0.80	2.5	1			10/30/2018 18:18	TMG	EPA 300.0

**REVISED
 ANALYTICAL REPORT**

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

Project Name: DELAFIELD LF
 Project Phase:
 Project #: 10-2018
 Folder #: 140649
 Purchase Order #:
 Contract #: 3123

Page 1 of 5
 Arrival Temperature: See COC
 Report Date: 11/19/2018
 Date Received: 10/30/2018
 Reprint Date: 12/05/2018
 Revision Date: 12/05/2018

CT LAB#: 202514 Sample Description: 1916

DNR License/Well #: 0719/383

Sampled: 10/29/2018 1105

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			10/29/2018 00:00	SUB	FIELD
Conductivity (Field)	1102	umhos/cm	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Odor (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
pH (Field)	7.01	S.U.	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Temperature (Field)	10.4	Deg. C	N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Turbidity (Field)	NONE		N/A	N/A	1			10/29/2018 00:00	SUB	FIELD
Inorganic Results										
Alkalinity	330	mg/L	4.0	4.0	1			11/09/2018 15:15	MEZ	SM 2320B
Total Cyanide	<0.0030	mg/L	0.0030	0.0090	1	U	11/05/2018 10:00	11/05/2018 12:59	LJS	EPA 335.4
Metals Results										
Total Barium	69.8	ug/L	0.70	2.5	1			10/31/2018 19:59	NAH	EPA 200.7
Total Beryllium	<0.38	ug/L	0.38	1.3	1	U		10/31/2018 19:59	NAH	EPA 200.7
Total Cadmium	<0.40	ug/L	0.40	1.4	1	U		10/31/2018 19:59	NAH	EPA 200.7
Total Calcium	96100	ug/L	31	110	1			10/31/2018 19:59	NAH	EPA 200.7
Total Chromium	<2.0	ug/L	2.0	8.0	1	U		10/31/2018 19:59	NAH	EPA 200.7

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

CT LAB#: 202514 Sample Description:1916

DNR License/Well #: 0719/383

Sampled: 10/29/2018 1105

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Total Copper	4.2	ug/L	3.9	13	1	J		10/31/2018 19:59	NAH	EPA 200.7
Total Iron	<59	ug/L	59	200	1	U		10/31/2018 19:59	NAH	EPA 200.7
Total Magnesium	48300	ug/L	25	84	1			10/31/2018 19:59	NAH	EPA 200.7
Total Manganese	<2.2	ug/L	2.2	7.3	1	U		10/31/2018 19:59	NAH	EPA 200.7
Total Zinc	15.3	ug/L	2.2	7.3	1			10/31/2018 19:59	NAH	EPA 200.7
Total Antimony	<0.60	ug/L	0.60	1.9	1	U		11/07/2018 12:36	MDS	EPA 200.9
Total Arsenic	<0.60	ug/L	0.60	2.1	1	U	11/01/2018 09:00	11/01/2018 16:24	MDS	EPA 200.9
Total Lead	<0.43	ug/L	0.43	1.4	1	U		11/01/2018 11:57	MDS	EPA 200.9
Total Selenium	<1.0	ug/L	1.0	3.4	1	U	11/01/2018 09:00	11/02/2018 10:45	MDS	EPA 200.9
Total Thallium	0.30	ug/L	0.19	0.61	1	J	11/01/2018 09:00	11/07/2018 17:14	MDS	EPA 200.9
Total Sodium	65.10	mg/L	0.030	0.10	1			10/31/2018 11:43	MDS	EPA 200.7
Total Hardness	439	mg/L	0.18	0.61	1			10/31/2018 19:59	NAH	SM 2340B/200.7
Organic Results										
1,1,1,2-Tetrachloroethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,1,1-Trichloroethane	<0.28	ug/L	0.28	0.93	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,1,2,2-Tetrachloroethane	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.3	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,1-Dichloroethane	<0.28	ug/L	0.28	0.95	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,1-Dichloroethene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,1-Dichloropropene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,2,3-Trichlorobenzene	<0.50	ug/L	0.50	1.6	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,2,3-Trichloropropane	<0.25	ug/L	0.25	0.83	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,2,4-Trichlorobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,2,4-Trimethylbenzene	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,2-Dichlorobenzene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:21	AGK	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#: 202514 Sample Description:1916

DNR License/Well #: 0719/383

Sampled: 10/29/2018 1105

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichloroethane	<0.23	ug/L	0.23	0.76	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,2-Dichloropropane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,3,5-Trimethylbenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,3-Dichlorobenzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,3-Dichloropropane	<0.30	ug/L	0.30	1.1	1	U		11/04/2018 21:21	AGK	EPA 524.2
1,4-Dichlorobenzene	<0.29	ug/L	0.29	0.98	1	U		11/04/2018 21:21	AGK	EPA 524.2
2,2-Dichloropropane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:21	AGK	EPA 524.2
2-Chlorotoluene	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:21	AGK	EPA 524.2
4-Chlorotoluene	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:21	AGK	EPA 524.2
Benzene	<0.26	ug/L	0.26	0.87	1	U		11/04/2018 21:21	AGK	EPA 524.2
Bromobenzene	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:21	AGK	EPA 524.2
Bromochloromethane	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:21	AGK	EPA 524.2
Bromodichloromethane	<0.24	ug/L	0.24	0.81	1	U		11/04/2018 21:21	AGK	EPA 524.2
Bromoform	<0.40	ug/L	0.40	1.2	1	U		11/04/2018 21:21	AGK	EPA 524.2
Bromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:21	AGK	EPA 524.2
Carbon tetrachloride	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 21:21	AGK	EPA 524.2
Chlorobenzene	<0.25	ug/L	0.25	0.84	1	U		11/04/2018 21:21	AGK	EPA 524.2
Chlorodibromomethane	<0.40	ug/L	0.40	1.4	1	U		11/04/2018 21:21	AGK	EPA 524.2
Chloroethane	<0.30	ug/L	0.30	1.3	1	U		11/04/2018 21:21	AGK	EPA 524.2
Chloroform	<0.23	ug/L	0.23	0.78	1	U		11/04/2018 21:21	AGK	EPA 524.2
Chloromethane	<0.19	ug/L	0.19	0.63	1	U		11/04/2018 21:21	AGK	EPA 524.2
cis-1,2-Dichloroethene	<0.28	ug/L	0.28	0.94	1	U		11/04/2018 21:21	AGK	EPA 524.2
cis-1,3-Dichloropropene	<0.22	ug/L	0.22	0.73	1	U		11/04/2018 21:21	AGK	EPA 524.2
Dibromomethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:21	AGK	EPA 524.2
Dichlorodifluoromethane	<0.30	ug/L	0.30	1.0	1	U		11/04/2018 21:21	AGK	EPA 524.2
Ethylbenzene	<0.27	ug/L	0.27	0.89	1	U		11/04/2018 21:21	AGK	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#: 202514 Sample Description:1916

DNR License/Well #: 0719/383

Sampled: 10/29/2018 1105

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Hexachlorobutadiene	<0.40	ug/L	0.40	1.4	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Isopropylbenzene	<0.29	ug/L	0.29	0.98	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Methyl tert-butyl ether	<0.26	ug/L	0.26	0.86	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Methylene chloride	<0.30	ug/L	0.30	0.99	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
n-Butylbenzene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
n-Propylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Naphthalene	<0.50	ug/L	0.50	1.5	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
p-Isopropyltoluene	<0.25	ug/L	0.25	0.82	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
sec-Butylbenzene	<0.26	ug/L	0.26	0.85	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Styrene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
tert-Butylbenzene	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Tetrachloroethene	<0.26	ug/L	0.26	0.87	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Toluene	<0.25	ug/L	0.25	0.84	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Total Xylene	<0.26	ug/L	0.26	0.88	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
trans-1,2-Dichloroethene	<0.23	ug/L	0.23	0.75	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
trans-1,3-Dichloropropene	<0.28	ug/L	0.28	0.93	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Trichloroethene	<0.30	ug/L	0.30	1.0	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Trichlorofluoromethane	<0.24	ug/L	0.24	0.80	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	EPA 524.2
Vinyl chloride	<0.17	ug/L	0.17	0.58	1	U	11/04/2018 21:21	11/04/2018 21:21	AGK	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" qualifier 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.

Eric T. Korthals
 Project Manager
 Submitted by: 608-356-2760

Reason for Revis corrected field data temperature on NR2B

<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