

From: Chabela, Lucas P <Lucas.Chabela@terracon.com>
Sent: Wednesday, May 24, 2023 2:40 PM
To: Saliars, Gwen N - DNR
Subject: WDNR Delafield Landfill - Potable Well Letters
Attachments: All Offsite Letters May 2023.pdf

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Gwen,

Good afternoon. Attached are the potable well letters for the April semi-annual sampling event. Letters are in the mail heading to the property owners. There were a few PAL exceedances for some metals including copper, iron, lead and other parameters such as chloride and nitrate. Well results appeared to be consist with historical results with the exception of the iron ES exceedance at 1916. This was the first time Iron was above its ES. However, iron is only regulated under the secondary standard for taste. Let me know if you have any questions.

Thanks,

Lucas P. Chabela
Senior Staff Geologist | Milwaukee Office



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Terracon provides environmental, facilities, geotechnical, and materials consulting engineering services delivered with responsiveness, resourcefulness, and reliability.

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May 23, 2023



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

Re: **Sample Results Notification – April 2023**
Sanitary Transfer and Landfill
3402 Kettle Court East
Delafield, Wisconsin 53018
BRRTS Case #02-26-000166
Terracon Project No. 58197097

Dear Mr. and Mrs. Troka:

On behalf of the Wisconsin Department of Natural Resources (WDNR), Terracon Consultants, Inc. (Terracon) is providing this letter to you to present the results of groundwater samples collected from your property.

On April 27, 2023, Terracon collected a groundwater sample from the potable well (11) on your property at N11 W31230 Bunker Hill, Delafield, Wisconsin. The sample was analyzed for volatile organic compounds (VOCs), metals, and several inorganic and field parameters. The WDNR has established groundwater quality standards, which are set forth in NR 140, Wisconsin Administrative Code (WAC). For each regulated compound, two standards have been established, the Enforcement Standard (ES) and the Preventive Action Limit (PAL). In general, if the regulated contaminant does not exceed either standard, no additional action is required. If the concentration exceeds the PAL, but is below the ES, additional investigation/continued monitoring may be required. If the regulated contaminant is above its ES, additional investigation, continued monitoring, and/or remediation may be required.

VOCs were not detected about the laboratory limit of detection (LOD). Several metals were detected above the LOD but well below their respective PALs. However, lead was detected at a concentration above its PAL but below its ES. Several inorganic parameters were detected but each parameter was below its respective ES. However, nitrate and chloride were detected slightly above their respective PALs. The PALs comprise a lower set of groundwater quality standards that serve as indicators of potential contamination and are below the ESs, which are based on the protection of public health and welfare. The results are summarized in the attached Table 1. The laboratory report is also attached.



Terracon Consultants, Inc. 9856 South 57th Street Franklin, Wisconsin 53132
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Geotechnical



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Sample Results Notification – April 2023

Sanitary Transfer and Landfill ■ Delafield, Wisconsin

May 23, 2023 ■ Terracon Project No. 58197097



Should you have any questions or concerns regarding these health standards, you may contact the following:

Department of Health Services
1 West Wilson Street
Madison, Wisconsin 53703
(608) 266-1865
DHSwebmaster@wisconsin.gov

If you have any questions for the water quality results or work at the landfill, please contact Gwen Saliaras via email at Gwen.Saliaras@wisconsin.gov or contact at (920) 510-4343.

Sincerely,

Terracon

A handwritten signature in cursive script that reads "Jacob Ruhkick".

Jacob A. Ruhkick
Field Scientist

A handwritten signature in cursive script that reads "L. Chabela".

Lucas P. Chabela
Senior Staff Geologist

JAR/LPC:ipc\N:\Projects\2019\58197097\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Offiste Notifications\11\5.2023\5.23 OffisteNotificationLetter.N11W31230.doc

Attachments – Table 1
Laboratory Analytical Report

Copies to: Gwen Saliaras, WDNR (electronic)

**Table 1
Potable Well Test Results for Metals and Inorganic Parameters**

Sanitary and Transfer Landfill - Delafield
3402 Kettle Court
Delafield, Wisconsin
Terracon Project No. 58197097

N11 W31230 Bunker Hill (11)	Metals (µg/L)																	Inorganic Parameters (mg/L)							Field Parameters						
Sample Date	Antimony	Arsenic	Barium	Boron	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Selenium	Sodium	Thallium	Zinc	TKN	Alkalinity	Nitrate	Nitrite	Sulfate	Hardness	Chloride	Cyanide	Odor	Color	Turbidity	pH	Conductivity (µs/cm)	Temperature (degrees C)
4/27/2023	<0.15	0.35J	72.1	40.5	<0.25	<0.15	944,400	1.4J	59.6	<58.0	3.6	42,700	6.2	0.43	106,000	<0.14	<10.3	0.24J	347	3.6	<0.021	18.4	411	190	<0.0069	None	Clear	None	7.53	19	39.23
NR 140 WAC, PAL¹	<u>1.2</u>	<u>1</u>	<u>400</u>	<u>200</u>	<u>0.4</u>	<u>0.5</u>	--	<u>10</u>	<u>130</u>	<u>150</u>	<u>1.5</u>	--	<u>60</u>	<u>10</u>	--	<u>0.4</u>	<u>2,500</u>	--	--	<u>2</u>	<u>0.2</u>	<u>125</u>	--	<u>125</u>	<u>0.04</u>	--	--	--	--	--	--
NR 140 WAC, ES²	6	10	2,000	1,000	4	5	--	100	1,300	300	15	--	300	50	--	2	5,000	--	--	10	1	250	--	250	0.2	--	--	--	--	--	--

Notes:
Metal results expressed in micrograms per liter (ug/L)
Inorganic Parameter results expressed in milligrams per liter (mg/L)
Conductivity results expressed as microsiemens per centimeter (µs/cm)
NS=Sample not analyzed for this analyte
-- = No Establish Standard
¹NR 140, Wisconsin Administrative Code, (WAC) Preventive Action Limit (PAL), Register, March 2023
²NR 140, WAC, Enforcement Standard (ES), Register, March 2023
XX.XX Exceeds NR 140 PAL
XX.XX Exceeds NR 140 ES

ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: 11 **Lab ID: 40261434003** Collected: 04/27/23 13:38 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Antimony	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:21	7440-36-0	
Arsenic	0.35J	ug/L	1.0	0.28	1	05/01/23 06:24	05/15/23 05:21	7440-38-2	
Barium	72.1	ug/L	2.3	0.70	1	05/01/23 06:24	05/15/23 05:21	7440-39-3	
Beryllium	<0.25	ug/L	1.0	0.25	1	05/01/23 06:24	05/15/23 05:21	7440-41-7	
Boron	40.5	ug/L	10.0	3.0	1	05/01/23 06:24	05/15/23 05:21	7440-42-8	
Cadmium	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:21	7440-43-9	
Calcium	94400	ug/L	254	76.2	1	05/01/23 06:24	05/15/23 05:21	7440-70-2	
Chromium	1.4J	ug/L	3.4	1.0	1	05/01/23 06:24	05/15/23 05:21	7440-47-3	
Copper	59.6	ug/L	6.4	1.9	1	05/01/23 06:24	05/15/23 05:21	7440-50-8	
Iron	<58.0	ug/L	250	58.0	1	05/01/23 06:24	05/15/23 05:21	7439-89-6	
Lead	3.6	ug/L	1.0	0.24	1	05/01/23 06:24	05/15/23 05:21	7439-92-1	
Magnesium	42700	ug/L	250	31.2	1	05/01/23 06:24	05/15/23 05:21	7439-95-4	
Manganese	6.2	ug/L	4.0	1.2	1	05/01/23 06:24	05/15/23 05:21	7439-96-5	
Selenium	0.43J	ug/L	1.1	0.32	1	05/01/23 06:24	05/15/23 05:21	7782-49-2	
Sodium	106000	ug/L	250	42.0	1	05/01/23 06:24	05/15/23 05:21	7440-23-5	
Thallium	<0.14	ug/L	1.0	0.14	1	05/01/23 06:24	05/15/23 05:21	7440-28-0	
Total Hardness by 2340B	411	mg/L	1.7	0.32	1	05/01/23 06:24	05/15/23 05:21		
Zinc	<10.3	ug/L	34.4	10.3	1	05/01/23 06:24	05/15/23 05:21	7440-66-6	
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 16:46	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/01/23 16:46	79-00-5	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 16:46	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/01/23 16:46	75-35-4	R1
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/01/23 16:46	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/01/23 16:46	106-93-4	R1
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 16:46	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/01/23 16:46	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/01/23 16:46	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/01/23 16:46	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/01/23 16:46	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/01/23 16:46	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/01/23 16:46	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/01/23 16:46	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 16:46	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/01/23 16:46	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/01/23 16:46	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/01/23 16:46	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/01/23 16:46	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/01/23 16:46	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/01/23 16:46	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/01/23 16:46	67-66-3	M1,R1
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/01/23 16:46	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/01/23 16:46	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: 11 **Lab ID: 40261434003** Collected: 04/27/23 13:38 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/01/23 16:46	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/01/23 16:46	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 16:46	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/01/23 16:46	1634-04-4	L2,M0
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/01/23 16:46	75-09-2	R1
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/01/23 16:46	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/01/23 16:46	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/01/23 16:46	127-18-4	M1,R1
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/01/23 16:46	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/01/23 16:46	108-88-3	R1
Trichloroethene	<0.32	ug/L	1.0	0.32	1		05/01/23 16:46	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 16:46	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/01/23 16:46	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/01/23 16:46	1330-20-7	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/01/23 16:46	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/01/23 16:46	10061-01-5	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		05/01/23 16:46	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		05/01/23 16:46	95-47-6	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/01/23 16:46	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/01/23 16:46	10061-02-6	R1
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		05/01/23 16:46	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		1		05/01/23 16:46	2199-69-1	
Toluene-d8 (S)	92	%	70-130		1		05/01/23 16:46	2037-26-5	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	190	mg/L	20.0	4.3	10		05/01/23 13:02	16887-00-6	
Nitrate as N	3.6	mg/L	0.15	0.044	1		04/28/23 18:39	14797-55-8	
Nitrite as N	<0.021	mg/L	0.10	0.021	1		04/28/23 18:39	14797-65-0	
Sulfate	18.4	mg/L	2.0	0.44	1		04/28/23 18:39	14808-79-8	
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	347	mg/L	25.0	7.4	1		05/10/23 10:23		
335.4 Cyanide, Total									
Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Pace Analytical Services - Green Bay									
Cyanide	<0.0069	mg/L	0.023	0.0069	1	05/09/23 14:30	05/09/23 16:39	57-12-5	
351.2 Total Kjeldahl Nitrogen									
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Pace Analytical Services - Green Bay									
Nitrogen, Kjeldahl, Total	0.24J	mg/L	1.0	0.21	1	05/02/23 20:50	05/03/23 01:37	7727-37-9	

REPORT OF LABORATORY ANALYSIS

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May 23, 2023



Ward Gronewold
W311 N1052 Fairfield Way
Delafield, Wisconsin 53018

Re: **Sample Results Notification – April 2023**
Sanitary Transfer and Landfill
3402 Kettle Court East
Delafield, Wisconsin 53018
BRRTS Case #02-26-000166
Terracon Project No. 58197097

Dear Mr. Gronewold:

On behalf of the Wisconsin Department of Natural Resources (WDNR), Terracon Consultants, Inc. (Terracon) is providing this letter to you to present the results of groundwater samples collected from your property.

On April 27, 2023, Terracon collected a groundwater sample from the potable well (13) on your property at W311 N1052 Fairfield Way, Delafield, Wisconsin. The sample was analyzed for volatile organic compounds (VOCs), metals, and several inorganic and field parameters. The WDNR has established groundwater quality standards, which are set forth in NR 140, Wisconsin Administrative Code (WAC). For each regulated compound, two standards have been established, the Enforcement Standard (ES) and the Preventive Action Limit (PAL). In general, if the regulated contaminant does not exceed either standard, no additional action is required. If the concentration exceeds the PAL, but is below the ES, additional investigation/continued monitoring may be required. If the regulated contaminant is above its ES, additional investigation, continued monitoring, and/or remediation may be required.

VOCs were not detected about the laboratory limit of detection (LOD). Several metals were detected above the LOD but well below their respective ESs. However, lead was detected slightly above its PAL. Several inorganic parameters were detected, but each parameter was below its respective ES. The results are summarized in the attached Table 1. The laboratory report is also attached.

Should you have any questions or concerns regarding these health standards, you may contact the following:

Department of Health Services
1 West Wilson Street
Madison, Wisconsin 53703
(608) 266-1865

Terracon Consultants, Inc. 9856 South 57th Street Franklin, Wisconsin 53132
P [414] 423 0255 F [414] 423 0566 terracon.com



Sample Results Notification – April 2023

Sanitary Transfer and Landfill ■ Delafield, Wisconsin

May 23, 2023 ■ Terracon Project No. 58197097



DHSwebmaster@wisconsin.gov

If you have any questions for the water quality results or work at the landfill, please contact Gwen Saliaras, P.G. via email at gwen.saliaras@wisconsin.gov or contact at 920-510-4343.

Sincerely,

Terracon

A handwritten signature in black ink that reads "Jacob A. Ruhkick". The signature is written in a cursive, flowing style.

Jacob A. Ruhkick
Field Scientist

A handwritten signature in black ink that reads "L. Chabela". The signature is written in a cursive, flowing style.

Lucas P. Chabela
Senior Staff Geologist

JAR/LPC:lpn\Projects\2019\58197097\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Offiste Notifications\13\5.2023\5.23
OffisteNotificationLetter.W311N1052.doc

Attachments – Table 1

Laboratory Analytical Report

Copies to: Gwen Saliaras, WDNR (electronic)

**Table 1
Potable Well Test Results for Metals and Inorganic Parameters**

Sanitary and Transfer Landfill - Delafield
3402 Kettle Court
Delafield, Wisconsin
Terracon Project No. 58197097

W311 N1052 Fairfield Way (13)	Metals (µg/L)																	Inorganic Parameters (mg/L)							Field Parameters						
	Antimony	Arsenic	Barium	Boron	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Selenium	Sodium	Thallium	Zinc	TKN	Alkalinity	Nitrate	Nitrite	Sulfate	Hardness	Chloride	Cyanide	Odor	Color	Turbidity	pH	Conductivity (µs/cm)	Temperature (degrees C)
4/27/2023	<0.15	0.36J	76.6	191	<0.25	<0.15	108,000	<1.0	28	<58.0	1.8	38,200	2.0J	<0.32	15,800	<0.14	17.9J	<0.21	312	0.56	<0.021	44.9	427	20.3	<0.0069	None	Clear	None	7.36	382	14.3
NR 140 WAC, PAL¹	1.2	1	400	200	0.4	0.5	-	10	130	150	1.5	-	60	10	-	0.4	2,500	-	-	2	0.2	125	-	125	0.04	-	-	-	-	-	-
NR 140 WAC, ES²	6	10	2,000	1,000	4	5	-	100	1,300	300	15	-	300	50	-	2	5,000	-	-	10	1	250	-	250	0.2	-	-	-	-	-	-

Notes:
Metal results expressed in micrograms per liter (ug/L)
Inorganic Parameter results expressed in milligrams per liter (mg/L)
Conductivity results expressed as microsiemens per centimeter (µs/cm)
NS=Sample not analyzed for this analyte
-- = No Establish Standard
¹NR 140, Wisconsin Administrative Code, (WAC) Preventive Action Limit (PAL), Register, March 2023
²NR 140, WAC, Enforcement Standard (ES), Register, March 2023
XX.XX Exceeds NR 140 PAL
XX.XX Exceeds NR 140 ES

ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Sample Project No.: 40261434

Sample: 13 **Lab ID: 40261434004** Collected: 04/27/23 14:15 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Antimony	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:28	7440-36-0	
Arsenic	0.36J	ug/L	1.0	0.28	1	05/01/23 06:24	05/15/23 05:28	7440-38-2	
Barium	76.6	ug/L	2.3	0.70	1	05/01/23 06:24	05/15/23 05:28	7440-39-3	
Beryllium	<0.25	ug/L	1.0	0.25	1	05/01/23 06:24	05/15/23 05:28	7440-41-7	
Boron	191	ug/L	10.0	3.0	1	05/01/23 06:24	05/15/23 05:28	7440-42-8	
Cadmium	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:28	7440-43-9	
Calcium	108000	ug/L	254	76.2	1	05/01/23 06:24	05/15/23 05:28	7440-70-2	
Chromium	<1.0	ug/L	3.4	1.0	1	05/01/23 06:24	05/15/23 05:28	7440-47-3	
Copper	28.0	ug/L	6.4	1.9	1	05/01/23 06:24	05/15/23 05:28	7440-50-8	
Iron	<58.0	ug/L	250	58.0	1	05/01/23 06:24	05/15/23 05:28	7439-89-6	
Lead	1.8	ug/L	1.0	0.24	1	05/01/23 06:24	05/15/23 05:28	7439-92-1	
Magnesium	38200	ug/L	250	31.2	1	05/01/23 06:24	05/15/23 05:28	7439-95-4	
Manganese	2.0J	ug/L	4.0	1.2	1	05/01/23 06:24	05/15/23 05:28	7439-96-5	
Selenium	<0.32	ug/L	1.1	0.32	1	05/01/23 06:24	05/15/23 05:28	7782-49-2	
Sodium	15800	ug/L	250	42.0	1	05/01/23 06:24	05/15/23 05:28	7440-23-5	
Thallium	<0.14	ug/L	1.0	0.14	1	05/01/23 06:24	05/15/23 05:28	7440-28-0	
Total Hardness by 2340B	427	mg/L	1.7	0.32	1	05/01/23 06:24	05/15/23 05:28		
Zinc	17.9J	ug/L	34.4	10.3	1	05/01/23 06:24	05/15/23 05:28	7440-66-6	
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 17:04	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/01/23 17:04	79-00-5	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 17:04	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/01/23 17:04	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/01/23 17:04	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/01/23 17:04	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 17:04	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/01/23 17:04	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/01/23 17:04	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/01/23 17:04	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/01/23 17:04	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/01/23 17:04	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/01/23 17:04	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/01/23 17:04	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 17:04	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/01/23 17:04	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/01/23 17:04	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/01/23 17:04	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/01/23 17:04	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/01/23 17:04	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/01/23 17:04	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/01/23 17:04	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/01/23 17:04	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/01/23 17:04	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: 13 **Lab ID: 40261434004** Collected: 04/27/23 14:15 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/01/23 17:04	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/01/23 17:04	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 17:04	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/01/23 17:04	1634-04-4	L2
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/01/23 17:04	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/01/23 17:04	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/01/23 17:04	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/01/23 17:04	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/01/23 17:04	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/01/23 17:04	108-88-3	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		05/01/23 17:04	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 17:04	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/01/23 17:04	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/01/23 17:04	1330-20-7	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/01/23 17:04	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/01/23 17:04	10061-01-5	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		05/01/23 17:04	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		05/01/23 17:04	95-47-6	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/01/23 17:04	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/01/23 17:04	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		05/01/23 17:04	460-00-4	
1,2-Dichlorobenzene-d4 (S)	112	%	70-130		1		05/01/23 17:04	2199-69-1	
Toluene-d8 (S)	93	%	70-130		1		05/01/23 17:04	2037-26-5	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	20.3	mg/L	2.0	0.43	1		04/28/23 18:54	16887-00-6	
Nitrate as N	0.56	mg/L	0.15	0.044	1		04/28/23 18:54	14797-55-8	
Nitrite as N	<0.021	mg/L	0.10	0.021	1		04/28/23 18:54	14797-65-0	
Sulfate	44.9	mg/L	2.0	0.44	1		04/28/23 18:54	14808-79-8	
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	312	mg/L	25.0	7.4	1		05/10/23 10:24		
335.4 Cyanide, Total									
Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Pace Analytical Services - Green Bay									
Cyanide	<0.0069	mg/L	0.023	0.0069	1	05/09/23 14:30	05/09/23 16:40	57-12-5	
351.2 Total Kjeldahl Nitrogen									
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Pace Analytical Services - Green Bay									
Nitrogen, Kjeldahl, Total	<0.21	mg/L	1.0	0.21	1	05/02/23 20:50	05/03/23 01:38	7727-37-9	

REPORT OF LABORATORY ANALYSIS

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May 23, 2023



James and Rita Lofy
N9 W31146 Concord Court
Delafield, Wisconsin 53018

Re: **Sample Results Notification – April 2023**
Sanitary Transfer and Landfill - Delafield
3402 Kettle Court East
Delafield, Wisconsin, 53018
BRRTS Case # 02-26-000166
Terracon Project No. 58197097

Dear Mr. and Mrs. Lofy:

On behalf of the Wisconsin Department of Natural Resources (WDNR), Terracon Consultants, Inc. (Terracon) is providing this letter to you to present the results of groundwater samples collected from your property.

On April 27, 2023, Terracon collected a groundwater sample from the potable well (15) on your property at N9 W31146 Concord Court, Delafield, Wisconsin. The WDNR has established groundwater quality standards, which are set forth in NR 140, Wisconsin Administrative Code (WAC). For each regulated compound, two standards have been established, the Enforcement Standard (ES) and the Preventive Action Limit (PAL). In general, if the regulated contaminant does not exceed either standard, no additional action is required. If the concentration exceeds the PAL, but is below the ES, additional investigation/continued monitoring may be required. If the regulated contaminant is above its ES, additional investigation, continued monitoring, and/or remediation may be required.

VOCs were not detected about the laboratory limit of detection (LOD). Several metals were detected above the LOD but well below their respective ES. However, lead was detected slightly above its PAL but below its ES. Several inorganic parameters were detected but each parameter was below its respective ES. The results are summarized in the attached Table 1. The laboratory report is also attached.

Should you have any questions or concerns regarding these health standards, you may contact the following:

Department of Health Services
1 West Wilson Street
Madison, Wisconsin 53703
(608) 266-1865
DHSwebmaster@wisconsin.gov

Terracon Consultants, Inc. 9856 South 57th Street Franklin, Wisconsin 53132
P [414] 423 0255 F [414] 423 0566 terracon.com



Sample Results Notification – April 2023

Sanitary Transfer and Landfill - Delafield ■ Delafield, Wisconsin

May 23, 2023 ■ Terracon Project No. 58197097



If you have any questions for the water quality results or work at the landfill, please contact Gwen Saliaries via email at gwen.saliaries@wisconsin.gov or contact by phone at (920) 510-4343.

Sincerely,

Terracon

A handwritten signature in black ink that reads "Jacob A. Ruhkick". The signature is written in a cursive, flowing style.

Jacob A. Ruhkick
Field Scientist

A handwritten signature in black ink that reads "Lucas P. Chabela". The signature is written in a cursive, flowing style.

Lucas P. Chabela
Senior Staff Geologist

JAR/LPC/BRS:ipc\N:\Projects\2019\58197097\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Offiste
Notifications\15\5.2023\5.23 OffisteNotificationLetter.N9W31146.doc

Attachments – Table 1

Laboratory Analytical Report

Copies to: Gwen Saliaries, WDNR (electronic)

**Table 1
Potable Well Test Results for Metals and Inorganic Parameters**

Sanitary and Transfer Landfill - Delafield
3402 Kettle Court
Delafield, Wisconsin
Terracon Project No. 58197097

Sample Date	Metals (µg/L)																	Inorganic Parameters (mg/L)							Field Parameters						
	Antimony	Arsenic	Barium	Boron	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Selenium	Sodium	Thallium	Zinc	TKN	Alkalinity	Nitrate	Nitrite	Sulfate	Hardness	Chloride	Cyanide	Odor	Color	Turbidity	pH	Conductivity (µs/cm)	Temperature (degrees C)
4/27/2023	<0.15	<0.28	128	24.6	<0.25	<0.15	146,000	<1.0	69.9	<58.0	1.6	43,100	<1.2	0.37J	10,700	<0.14	106	<0.21	321	1.5	<0.021	49.0	541	30.7	<0.0069	None	Clear	None	7.23	447	15.6
NR 140 WAC, PAL¹	1.2	1	400	200	0.4	0.5	-	10	130	150	1.5	-	60	10	-	0.4	2,500	-	-	2	0.2	125	-	125	0.04	-	-	-	-	-	-
NR 140 WAC, ES²	6	10	2,000	1,000	4	5	-	100	1,300	300	15	-	300	50	-	2	5,000	-	-	10	1	250	-	250	0.2	-	-	-	-	-	-

Notes:
 Metal results expressed in micrograms per liter (ug/L)
 Inorganic Parameter results expressed in milligrams per liter (mg/L)
 Conductivity results expressed as microsiemens per centimeter (µs/cm)
 NS=Sample not analyzed for this analyte
 -- = No Establish Standard

¹NR 140, Wisconsin Administrative Code, (WAC) Preventive Action Limit (PAL), Register, March 2023

²NR 140, WAC, Enforcement Standard (ES), Register, March 2023

XX.XX Exceeds NR 140 PAL
XX.XX Exceeds NR 140 ES

ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: 15 **Lab ID: 40261434005** Collected: 04/27/23 15:10 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Antimony	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:35	7440-36-0	
Arsenic	<0.28	ug/L	1.0	0.28	1	05/01/23 06:24	05/15/23 05:35	7440-38-2	
Barium	128	ug/L	2.3	0.70	1	05/01/23 06:24	05/15/23 05:35	7440-39-3	
Beryllium	<0.25	ug/L	1.0	0.25	1	05/01/23 06:24	05/15/23 05:35	7440-41-7	
Boron	24.6	ug/L	10.0	3.0	1	05/01/23 06:24	05/15/23 05:35	7440-42-8	
Cadmium	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:35	7440-43-9	
Calcium	146000	ug/L	254	76.2	1	05/01/23 06:24	05/15/23 05:35	7440-70-2	
Chromium	<1.0	ug/L	3.4	1.0	1	05/01/23 06:24	05/15/23 05:35	7440-47-3	
Copper	69.9	ug/L	6.4	1.9	1	05/01/23 06:24	05/15/23 05:35	7440-50-8	
Iron	<58.0	ug/L	250	58.0	1	05/01/23 06:24	05/15/23 05:35	7439-89-6	
Lead	1.6	ug/L	1.0	0.24	1	05/01/23 06:24	05/15/23 05:35	7439-92-1	
Magnesium	43100	ug/L	250	31.2	1	05/01/23 06:24	05/15/23 05:35	7439-95-4	
Manganese	<1.2	ug/L	4.0	1.2	1	05/01/23 06:24	05/15/23 05:35	7439-96-5	
Selenium	0.37J	ug/L	1.1	0.32	1	05/01/23 06:24	05/15/23 05:35	7782-49-2	
Sodium	10700	ug/L	250	42.0	1	05/01/23 06:24	05/15/23 05:35	7440-23-5	
Thallium	<0.14	ug/L	1.0	0.14	1	05/01/23 06:24	05/15/23 05:35	7440-28-0	
Total Hardness by 2340B	541	mg/L	1.7	0.32	1	05/01/23 06:24	05/15/23 05:35		
Zinc	106	ug/L	34.4	10.3	1	05/01/23 06:24	05/15/23 05:35	7440-66-6	
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 17:23	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/01/23 17:23	79-00-5	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 17:23	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/01/23 17:23	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/01/23 17:23	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/01/23 17:23	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 17:23	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/01/23 17:23	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/01/23 17:23	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/01/23 17:23	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/01/23 17:23	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/01/23 17:23	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/01/23 17:23	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/01/23 17:23	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 17:23	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/01/23 17:23	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/01/23 17:23	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/01/23 17:23	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/01/23 17:23	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/01/23 17:23	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/01/23 17:23	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/01/23 17:23	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/01/23 17:23	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/01/23 17:23	124-48-1	

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ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL
Pace Project No.: 40261434

Sample: 15 **Lab ID: 40261434005** Collected: 04/27/23 15:10 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/01/23 17:23	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/01/23 17:23	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 17:23	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/01/23 17:23	1634-04-4	L2
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/01/23 17:23	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/01/23 17:23	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/01/23 17:23	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/01/23 17:23	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/01/23 17:23	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/01/23 17:23	108-88-3	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		05/01/23 17:23	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 17:23	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/01/23 17:23	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/01/23 17:23	1330-20-7	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/01/23 17:23	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/01/23 17:23	10061-01-5	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		05/01/23 17:23	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		05/01/23 17:23	95-47-6	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/01/23 17:23	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/01/23 17:23	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		05/01/23 17:23	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		05/01/23 17:23	2199-69-1	
Toluene-d8 (S)	94	%	70-130		1		05/01/23 17:23	2037-26-5	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	30.7	mg/L	2.0	0.43	1		04/28/23 19:09	16887-00-6	
Nitrate as N	1.5	mg/L	0.15	0.044	1		04/28/23 19:09	14797-55-8	
Nitrite as N	<0.021	mg/L	0.10	0.021	1		04/28/23 19:09	14797-65-0	
Sulfate	49.0	mg/L	2.0	0.44	1		04/28/23 19:09	14808-79-8	
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	321	mg/L	25.0	7.4	1		05/10/23 10:25		
335.4 Cyanide, Total									
Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Pace Analytical Services - Green Bay									
Cyanide	<0.0069	mg/L	0.023	0.0069	1	05/09/23 14:30	05/09/23 16:40	57-12-5	
351.2 Total Kjeldahl Nitrogen									
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Pace Analytical Services - Green Bay									
Nitrogen, Kjeldahl, Total	<0.21	mg/L	1.0	0.21	1	05/02/23 20:50	05/03/23 01:39	7727-37-9	

REPORT OF LABORATORY ANALYSIS

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May 23, 2023



Michael Sitarz
W312 N1055 Fairfield Way
Delafield, Wisconsin 53018

Re: **Sample Results Notification – April 2023**
Sanitary Transfer and Landfill - Delafield
3402 Kettle Court East
Delafield, Wisconsin, 53018
BRRTS Case # 02-26-000166
Terracon Project No. 58197097

Dear Mr. Sitarz:

On behalf of the Wisconsin Department of Natural Resources (WDNR), Terracon Consultants, Inc. (Terracon) is providing this letter to you to present the results of groundwater samples collected from your property.

On April 27, 2023, Terracon collected a groundwater sample from the potable well (54) on your property at W312 N1055 Fairfield Way, Delafield, Wisconsin. The WDNR has established groundwater quality standards, which are set forth in NR 140, Wisconsin Administrative Code (WAC). For each regulated compound, two standards have been established, the Enforcement Standard (ES) and the Preventive Action Limit (PAL). In general, if the regulated contaminant does not exceed either standard, no additional action is required. If the concentration exceeds the PAL, but is below the ES, additional investigation/continued monitoring may be required. If the regulated contaminant is above its ES, additional investigation, continued monitoring, and/or remediation may be required.

VOCs were not detected about the laboratory limit of detection (LOD). Several metals were detected above the LOD but well below their respective ES. However, iron, copper and lead were both detected above their respective PALs but below their ESs. Several inorganic parameters were detected but each parameter was below its respective ES. The results are summarized in the attached Table 1. The laboratory report is also attached.

Should you have any questions or concerns regarding these health standards, you may contact the following:

Department of Health Services
1 West Wilson Street
Madison, Wisconsin 53703
(608) 266-1865
DHSwebmaster@wisconsin.gov

Terracon Consultants, Inc. 9856 South 57th Street Franklin, Wisconsin 53132
P [414] 423 0255 F [414] 423 0566 terracon.com



Sample Results Notification – April 2023

Sanitary Transfer and Landfill - Delafield ■ Delafield, Wisconsin

May 23, 2023 ■ Terracon Project No. 58197097



If you have any questions for the water quality results or work at the landfill, please contact Gwen Saliarvia email at gwen.saliarvia@wisconsin.gov or contact our office at (920) 510-4343.

Sincerely,

Terracon

A handwritten signature in black ink that reads "Jacob A. Ruhkick". The signature is written in a cursive, flowing style.

Jacob A. Ruhkick
Field Scientist

A handwritten signature in black ink that reads "L. Chabela". The signature is written in a cursive, flowing style.

Lucas P. Chabela
Senior Staff Geologist

JAR/LPC:lpn:\Projects\2019\58197097\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Offiste Notifications\54\5.2023\5.23
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Attachments – Table 1

Laboratory Analytical Report

Copies to: Gwen Saliarvia, WDNR (electronic)

**Table 1
Potable Well Test Results for Metals and Inorganic Parameters**

Sanitary and Transfer Landfill - Delafield
3402 Kettle Court
Delafield, Wisconsin
Terracon Project No. 58197097

W312 N1055 Fairfield Way (54)	Metals (µg/L)																	Inorganic Parameters (mg/L)							Field Parameters						
	Antimony	Arsenic	Barium	Boron	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Selenium	Sodium	Thallium	Zinc	TKN	Alkalinity	Nitrate	Nitrite	Sulfate	Hardness	Chloride	Cyanide	Odor	Color	Turbidity	pH	Conductivity (µs/cm)	Temperature (degrees C)
4/27/2023	<0.15	<0.28	100	197	<0.25	<0.15	121,000	<1.0	277	153	3.0	45,200	11.2	<0.32	49,900	<0.14	163	<0.21	338	<0.044	<0.021	54.1	488	101	<0.0069	None	Clear	None	7.91	851	14.59
NR 140 WAC, PAL¹	1.2	1	400	200	0.4	0.5	-	10	130	150	1.5	-	60	10	-	0.4	2,500	-	-	2	0.2	125	-	125	0.04	-	-	-	-	-	-
NR 140 WAC, ES²	6	10	2,000	1,000	4	5	-	100	1,300	300	15	-	300	50	-	2	5,000	-	-	10	1	250	-	250	0.2	-	-	-	-	-	-

Notes:
Metal results expressed in micrograms per liter (ug/L)
Inorganic Parameter results expressed in milligrams per liter (mg/L)
Conductivity results expressed as microsiemens per centimeter (µs/cm)
NS=Sample not analyzed for this analyte
-- = No Establish Standard

¹NR 140, Wisconsin Administrative Code, (WAC) Preventive Action Limit (PAL), Register, March 2023

²NR 140, WAC, Enforcement Standard (ES), Register, March 2023

XX.XX Exceeds NR 140 PAL
XX.XX Exceeds NR 140 ES

ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Sample Project No.: 40261434

Sample: 54 **Lab ID: 40261434006** Collected: 04/27/23 13:57 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Antimony	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:43	7440-36-0	
Arsenic	<0.28	ug/L	1.0	0.28	1	05/01/23 06:24	05/15/23 05:43	7440-38-2	
Barium	100	ug/L	2.3	0.70	1	05/01/23 06:24	05/15/23 05:43	7440-39-3	
Beryllium	<0.25	ug/L	1.0	0.25	1	05/01/23 06:24	05/15/23 05:43	7440-41-7	
Boron	197	ug/L	10.0	3.0	1	05/01/23 06:24	05/15/23 05:43	7440-42-8	
Cadmium	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:43	7440-43-9	
Calcium	121000	ug/L	254	76.2	1	05/01/23 06:24	05/15/23 05:43	7440-70-2	
Chromium	<1.0	ug/L	3.4	1.0	1	05/01/23 06:24	05/15/23 05:43	7440-47-3	
Copper	277	ug/L	6.4	1.9	1	05/01/23 06:24	05/15/23 05:43	7440-50-8	
Iron	153J	ug/L	250	58.0	1	05/01/23 06:24	05/15/23 05:43	7439-89-6	
Lead	3.0	ug/L	1.0	0.24	1	05/01/23 06:24	05/15/23 05:43	7439-92-1	
Magnesium	45200	ug/L	250	31.2	1	05/01/23 06:24	05/15/23 05:43	7439-95-4	
Manganese	11.2	ug/L	4.0	1.2	1	05/01/23 06:24	05/15/23 05:43	7439-96-5	
Selenium	<0.32	ug/L	1.1	0.32	1	05/01/23 06:24	05/15/23 05:43	7782-49-2	
Sodium	49900	ug/L	250	42.0	1	05/01/23 06:24	05/15/23 05:43	7440-23-5	
Thallium	<0.14	ug/L	1.0	0.14	1	05/01/23 06:24	05/15/23 05:43	7440-28-0	
Total Hardness by 2340B	488	mg/L	1.7	0.32	1	05/01/23 06:24	05/15/23 05:43		
Zinc	163	ug/L	34.4	10.3	1	05/01/23 06:24	05/15/23 05:43	7440-66-6	
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 17:42	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/01/23 17:42	79-00-5	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 17:42	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/01/23 17:42	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/01/23 17:42	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/01/23 17:42	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 17:42	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/01/23 17:42	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/01/23 17:42	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/01/23 17:42	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/01/23 17:42	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/01/23 17:42	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/01/23 17:42	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/01/23 17:42	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 17:42	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/01/23 17:42	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/01/23 17:42	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/01/23 17:42	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/01/23 17:42	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/01/23 17:42	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/01/23 17:42	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/01/23 17:42	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/01/23 17:42	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/01/23 17:42	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: 54 **Lab ID: 40261434006** Collected: 04/27/23 13:57 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/01/23 17:42	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/01/23 17:42	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 17:42	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/01/23 17:42	1634-04-4	L2
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/01/23 17:42	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/01/23 17:42	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/01/23 17:42	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/01/23 17:42	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/01/23 17:42	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/01/23 17:42	108-88-3	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		05/01/23 17:42	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 17:42	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/01/23 17:42	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/01/23 17:42	1330-20-7	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/01/23 17:42	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/01/23 17:42	10061-01-5	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		05/01/23 17:42	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		05/01/23 17:42	95-47-6	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/01/23 17:42	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/01/23 17:42	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	110	%	70-130		1		05/01/23 17:42	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		1		05/01/23 17:42	2199-69-1	
Toluene-d8 (S)	92	%	70-130		1		05/01/23 17:42	2037-26-5	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	101	mg/L	10.0	2.2	5		05/01/23 13:17	16887-00-6	
Nitrate as N	<0.044	mg/L	0.15	0.044	1		04/28/23 19:24	14797-55-8	
Nitrite as N	<0.021	mg/L	0.10	0.021	1		04/28/23 19:24	14797-65-0	
Sulfate	54.1	mg/L	2.0	0.44	1		04/28/23 19:24	14808-79-8	
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	338	mg/L	25.0	7.4	1		05/10/23 10:26		
335.4 Cyanide, Total									
Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Pace Analytical Services - Green Bay									
Cyanide	<0.0069	mg/L	0.023	0.0069	1	05/09/23 14:30	05/09/23 16:41	57-12-5	
351.2 Total Kjeldahl Nitrogen									
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Pace Analytical Services - Green Bay									
Nitrogen, Kjeldahl, Total	<0.21	mg/L	1.0	0.21	1	05/02/23 20:50	05/03/23 01:40	7727-37-9	

REPORT OF LABORATORY ANALYSIS

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May 23, 2023



Chuck and Sharilyn Spiegeloff
1916 Hillside Court
Delafield, Wisconsin 53018

Re: **Sample Results Notification – April 2023**
Sanitary Transfer and Landfill - Delafield
3402 Kettle Court East
Delafield, Wisconsin, 53018
BRRTS Case # 02-26-000166
Terracon Project No. 58197097

Dear Mr. and Mrs. Spiegeloff :

On behalf of the Wisconsin Department of Natural Resources, Terracon Consultants, Inc. (Terracon) is providing this letter to you to present the results of groundwater samples collected from your property.

On April 27, 2023, Terracon collected a groundwater sample from the potable well (1916) on your property at 1916 Hillside Court, Delafield, Wisconsin. The sample was analyzed for volatile organic compounds (VOCs), metals, and several inorganic and field parameters. The WDNR has established groundwater quality standards, which are set forth in NR 140, Wisconsin Administrative Code (WAC). For each regulated compound, two standards have been established, the Enforcement Standard (ES) and the Preventive Action Limit (PAL). In general, if the regulated contaminant does not exceed either standard, no additional action is required. If the concentration exceeds the PAL, but is below the ES, additional investigation/continued monitoring may be required. If the regulated contaminant is above its ES, additional investigation, continued monitoring, and/or remediation may be required.

VOCs were not detected about the laboratory limit of detection (LOD). Several metals were detected above the LOD but well below their respective ES. Iron, however, was detected above its ES. Several inorganic parameters were detected but each parameter was below its respective ES. The PALs comprise a lower set of groundwater quality standards that serve as indicators of potential contamination and are below the ESs, which are based on the protection of public health and welfare. The results are summarized in the attached Table 1. The laboratory report is also attached.



Terracon Consultants, Inc. 9856 South 57th Street Franklin, Wisconsin 53132
P [414] 423 0255 F [414] 423 0566 terracon.com

Geotechnical



Environmental



Construction Materials



Facilities

Sample Results Notification – April 2023

Sanitary Transfer and Landfill - Delafield ■ Delafield, Wisconsin

May 23, 2023 ■ Terracon Project No. 58197097



Should you have any questions or concerns regarding these health standards, you may contact the following:

Department of Health Services
1 West Wilson Street
Madison, Wisconsin 53703
(608) 266-1865
DHSwebmaster@wisconsin.gov

If you have any questions for the water quality results or work at the landfill, please contact Gwen Saliars via email at gwen.saliars@wisconsin.gov at (920) 510-4343.

Sincerely,

Terracon

A handwritten signature in black ink that reads "Jacob A. Ruhkick". The signature is written in a cursive, flowing style.

Jacob A. Ruhkick
Field Scientist

A handwritten signature in black ink that reads "L. Chabela". The signature is written in a cursive, flowing style.

Lucas P. Chabela
Senior Staff Geologist

JAR/LPC:ipc\N:\Projects\2019\58197097\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Offiste Notifications\1916\5.2023\5.23 OffisteNotificationLetter.1916.doc

Attachments – Table 1

Laboratory Analytical Report

Copies to: Gwen Saliars, WDNR (electronic)

**Table 1
Potable Well Test Results for Metals and Inorganic Parameters**

Sanitary and Transfer Landfill - Delafield
3402 Kettle Court
Delafield, Wisconsin
Terracon Project No. 58197097

1916 Hillside Court (1916)	Metals (µg/L)																	Inorganic Parameters (mg/L)							Field Parameters						
Sample Date	Antimony	Arsenic	Barium	Boron	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Selenium	Sodium	Thallium	Zinc	TKN	Alkalinity	Nitrate	Nitrite	Sulfate	Hardness	Chloride	Cyanide	Odor	Color	Turbidity	pH	Conductivity (µs/cm)	Temperature (degrees C)
4/27/2023	<0.15	<0.28	44.6	109	<0.25	<0.15	65,000	<1.0	10.0	318	1.3	22,300	5.4	<0.32	6,100	<0.14	261	<0.21	238	<0.044	<0.021	21.6	254	1.2J	<0.0069	None	Clear	None	6.33	592	13.2
NR 140 WAC, PAL¹	1.2	1	400	200	0.4	0.5	-	10	130	150	1.5	-	60	10	-	0.4	2,500	-	-	2	0.2	125	-	125	0.04	-	-	-	-	-	-
NR 140 WAC, ES²	6	10	2,000	1,000	4	5	-	100	1,300	300	15	-	300	50	-	2	5,000	-	-	10	1	250	-	250	0.2	-	-	-	-	-	-

Notes:
Metal results expressed in micrograms per liter (ug/L)
Inorganic Parameter results expressed in milligrams per liter (mg/L)
Conductivity results expressed as microsiemens per centimeter (µs/cm)
NS=Sample not analyzed for this analyte
-- = No Establish Standard
¹NR 140, Wisconsin Administrative Code, (WAC) Preventive Action Limit (PAL), Register, March 2023
²NR 140, WAC, Enforcement Standard (ES), Register, March 2023
XX.XX Exceeds NR 140 PAL
XX.XX Exceeds NR 140 ES

ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: 1916 **Lab ID: 40261434007** Collected: 04/27/23 15:29 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Antimony	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:50	7440-36-0	
Arsenic	<0.28	ug/L	1.0	0.28	1	05/01/23 06:24	05/15/23 05:50	7440-38-2	
Barium	44.6	ug/L	2.3	0.70	1	05/01/23 06:24	05/15/23 05:50	7440-39-3	
Beryllium	<0.25	ug/L	1.0	0.25	1	05/01/23 06:24	05/15/23 05:50	7440-41-7	
Boron	109	ug/L	10.0	3.0	1	05/01/23 06:24	05/15/23 05:50	7440-42-8	
Cadmium	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:50	7440-43-9	
Calcium	65000	ug/L	254	76.2	1	05/01/23 06:24	05/15/23 05:50	7440-70-2	
Chromium	<1.0	ug/L	3.4	1.0	1	05/01/23 06:24	05/15/23 05:50	7440-47-3	
Copper	10.0	ug/L	6.4	1.9	1	05/01/23 06:24	05/15/23 05:50	7440-50-8	
Iron	318	ug/L	250	58.0	1	05/01/23 06:24	05/15/23 05:50	7439-89-6	
Lead	1.2	ug/L	1.0	0.24	1	05/01/23 06:24	05/15/23 05:50	7439-92-1	
Magnesium	22300	ug/L	250	31.2	1	05/01/23 06:24	05/15/23 05:50	7439-95-4	
Manganese	5.4	ug/L	4.0	1.2	1	05/01/23 06:24	05/15/23 05:50	7439-96-5	
Selenium	<0.32	ug/L	1.1	0.32	1	05/01/23 06:24	05/15/23 05:50	7782-49-2	
Sodium	6100	ug/L	250	42.0	1	05/01/23 06:24	05/15/23 05:50	7440-23-5	
Thallium	<0.14	ug/L	1.0	0.14	1	05/01/23 06:24	05/15/23 05:50	7440-28-0	
Total Hardness by 2340B	254	mg/L	1.7	0.32	1	05/01/23 06:24	05/15/23 05:50		
Zinc	261	ug/L	34.4	10.3	1	05/01/23 06:24	05/15/23 05:50	7440-66-6	
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 18:00	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/01/23 18:00	79-00-5	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 18:00	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/01/23 18:00	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/01/23 18:00	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/01/23 18:00	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 18:00	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/01/23 18:00	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/01/23 18:00	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/01/23 18:00	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/01/23 18:00	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/01/23 18:00	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/01/23 18:00	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/01/23 18:00	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 18:00	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/01/23 18:00	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/01/23 18:00	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/01/23 18:00	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/01/23 18:00	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/01/23 18:00	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/01/23 18:00	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/01/23 18:00	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/01/23 18:00	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/01/23 18:00	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: 1916 **Lab ID: 40261434007** Collected: 04/27/23 15:29 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/01/23 18:00	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/01/23 18:00	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 18:00	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/01/23 18:00	1634-04-4	L2
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/01/23 18:00	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/01/23 18:00	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/01/23 18:00	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/01/23 18:00	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/01/23 18:00	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/01/23 18:00	108-88-3	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		05/01/23 18:00	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 18:00	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/01/23 18:00	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/01/23 18:00	1330-20-7	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/01/23 18:00	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/01/23 18:00	10061-01-5	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		05/01/23 18:00	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		05/01/23 18:00	95-47-6	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/01/23 18:00	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/01/23 18:00	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-130		1		05/01/23 18:00	460-00-4	
1,2-Dichlorobenzene-d4 (S)	94	%	70-130		1		05/01/23 18:00	2199-69-1	
Toluene-d8 (S)	93	%	70-130		1		05/01/23 18:00	2037-26-5	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	1.2J	mg/L	2.0	0.43	1		04/28/23 19:39	16887-00-6	
Nitrate as N	<0.044	mg/L	0.15	0.044	1		04/28/23 19:39	14797-55-8	
Nitrite as N	<0.021	mg/L	0.10	0.021	1		04/28/23 19:39	14797-65-0	
Sulfate	21.6	mg/L	2.0	0.44	1		04/28/23 19:39	14808-79-8	
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	238	mg/L	25.0	7.4	1		05/10/23 10:27		
335.4 Cyanide, Total									
Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Pace Analytical Services - Green Bay									
Cyanide	<0.0069	mg/L	0.023	0.0069	1	05/09/23 14:30	05/09/23 16:42	57-12-5	
351.2 Total Kjeldahl Nitrogen									
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Pace Analytical Services - Green Bay									
Nitrogen, Kjeldahl, Total	<0.21	mg/L	1.0	0.21	1	05/02/23 20:50	05/03/23 01:41	7727-37-9	

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May 23, 2023



Mr. Erwin Sulma
W310 N1055 Bunker Hill Tr.
Delafield, Wisconsin 53018

Mr. Craig Van Der Bunt
W310 N1054 Bunker Hill Tr.
Delafield, Wisconsin 53018

Re: **Sample Results Notification – April 2023**
Sanitary Transfer and Landfill - Delafield
3402 Kettle Court East
Delafield, Wisconsin, 53018
BRRTS Case # 02-26-000166
Terracon Project No. 58197097

Dear Mr. Sulma and Mr. Van Der Bunt :

On behalf of the Wisconsin Department of Natural Resources (WDNR), Terracon Consultants, Inc. (Terracon) is providing this letter to you to present the results of groundwater samples collected from your property.

On April 27, 2023, Terracon collected a groundwater sample from the potable well (Lot 15) on your properties at W310 N1055 and W310 N1054 Bunker Hill Tr., Delafield, Wisconsin. The WDNR has established groundwater quality standards, which are set forth in NR 140, Wisconsin Administrative Code (WAC). For each regulated compound, two standards have been established, the Enforcement Standard (ES) and the Preventive Action Limit (PAL). In general, if the regulated contaminant does not exceed either standard, no additional action is required. If the concentration exceeds the PAL, but is below the ES, additional investigation/continued monitoring may be required. If the regulated contaminant is above its ES, additional investigation, continued monitoring, and/or remediation may be required.

VOCs were not detected about the laboratory limit of detection (LOD). Several metals were detected above the LOD but well below their respective ES. Only lead was detected above its PAL. Several inorganic parameters were detected but each parameter was below its ES. Both nitrate and chloride were detected slightly above their respective PALs. The results are summarized in the attached Table 1. The laboratory report is also attached.



Terracon Consultants, Inc. 9856 South 57th Street Franklin, Wisconsin 53132
P [414] 423 0255 F [414] 423 0566 terracon.com

Geotechnical



Environmental



Construction Materials



Facilities

Sample Results Notification – April 2023

Sanitary Transfer and Landfill - Delafield ■ Delafield, Wisconsin

May 23, 2023 ■ Terracon Project No. 58197097



Should you have any questions or concerns regarding these health standards, you may contact the following:

Department of Health Services
1 West Wilson Street
Madison, Wisconsin 53703
(608) 266-1865
DHSwebmaster@wisconsin.gov

If you have any questions for the water quality results or work at the landfill, please contact Gwen Saliars via email at gwen.saliars@wisconsin.gov or contact at (920) 510-4343.

Sincerely,

Terracon

A handwritten signature in black ink that reads "Jacob Ruhkick". The signature is written in a cursive, flowing style.

Jacob A. Ruhkick
Field Scientist

A handwritten signature in black ink that reads "L. Chabela". The signature is written in a cursive, flowing style.

Lucas P. Chabela
Senior Staff Geologist

JAR/LPC:ipc/N:\Projects\2019\58197097\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Offsite Notifications\Lot 15\5.2023\5.23 OffsiteNotificationLetter.W310N1055&W310N1054.doc

Attachments – Table 1

Laboratory Analytical Report

Copies to: Gwen Saliars, WDNR (electronic)

**Table 1
Potable Well Test Results for Metals and Inorganic Parameters**

Sanitary and Transfer Landfill - Delafield
3402 Kettle Court
Delafield, Wisconsin
Terracon Project No. 58197097

W310N1071/W310N1054 Bunker Hill Tr. (Lot 15)	Metals (µg/L)																	Inorganic Parameters (mg/L)							Field Parameters						
	Antimony	Arsenic	Barium	Boron	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Selenium	Sodium	Thallium	Zinc	TKN	Alkalinity	Nitrate	Nitrite	Sulfate	Hardness	Chloride	Cyanide	Odor	Color	Turbidity	pH	Conductivity (µs/cm)	Temperature (degrees C)
4/27/2023	<0.15	<0.28	72.6	33.5	<0.25	<0.15	101,000	<1.0	28.7	<58.0	3.0	49,100	1.5J	<0.32	91,200	<0.14	146	<0.21	345	5.6	<0.021	25.7	454	186	<0.0069	None	Clear	None	7.32	26	24.97
NR 140 WAC, PAL¹	1.2	1	400	200	0.4	0.5	-	10	130	150	1.5	-	60	10	-	0.4	2,500	-	-	2	0.2	125	-	125	0.04	-	-	-	-	-	-
NR 140 WAC, ES²	6	10	2,000	1,000	4	5	-	100	1,300	300	15	-	300	50	-	2	5,000	-	-	10	1	250	-	250	0.2	-	-	-	-	-	-

Notes:
Metal results expressed in micrograms per liter (ug/L)
Inorganic Parameter results expressed in milligrams per liter (mg/L)
Conductivity results expressed as microsiemens per centimeter (µs/cm)
NS=Sample not analyzed for this analyte
-- = No Establish Standard

¹NR 140, Wisconsin Administrative Code, (WAC) Preventive Action Limit (PAL), Register, March 2023

²NR 140, WAC, Enforcement Standard (ES), Register, March 2023

XX.XX Exceeds NR 140 PAL
XX.XX Exceeds NR 140 ES

ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Sample Project No.: 40261434

Sample: LOT 15 **Lab ID: 40261434008** Collected: 04/27/23 13:00 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Antimony	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:58	7440-36-0	
Arsenic	<0.28	ug/L	1.0	0.28	1	05/01/23 06:24	05/15/23 05:58	7440-38-2	
Barium	72.6	ug/L	2.3	0.70	1	05/01/23 06:24	05/15/23 05:58	7440-39-3	
Beryllium	<0.25	ug/L	1.0	0.25	1	05/01/23 06:24	05/15/23 05:58	7440-41-7	
Boron	33.5	ug/L	10.0	3.0	1	05/01/23 06:24	05/15/23 05:58	7440-42-8	
Cadmium	<0.15	ug/L	1.0	0.15	1	05/01/23 06:24	05/15/23 05:58	7440-43-9	
Calcium	101000	ug/L	254	76.2	1	05/01/23 06:24	05/15/23 05:58	7440-70-2	
Chromium	<1.0	ug/L	3.4	1.0	1	05/01/23 06:24	05/15/23 05:58	7440-47-3	
Copper	28.7	ug/L	6.4	1.9	1	05/01/23 06:24	05/15/23 05:58	7440-50-8	
Iron	<58.0	ug/L	250	58.0	1	05/01/23 06:24	05/15/23 05:58	7439-89-6	
Lead	3.0	ug/L	1.0	0.24	1	05/01/23 06:24	05/15/23 05:58	7439-92-1	
Magnesium	49100	ug/L	250	31.2	1	05/01/23 06:24	05/15/23 05:58	7439-95-4	
Manganese	1.5J	ug/L	4.0	1.2	1	05/01/23 06:24	05/15/23 05:58	7439-96-5	
Selenium	<0.32	ug/L	1.1	0.32	1	05/01/23 06:24	05/15/23 05:58	7782-49-2	
Sodium	91200	ug/L	250	42.0	1	05/01/23 06:24	05/15/23 05:58	7440-23-5	
Thallium	<0.14	ug/L	1.0	0.14	1	05/01/23 06:24	05/15/23 05:58	7440-28-0	
Total Hardness by 2340B	454	mg/L	1.7	0.32	1	05/01/23 06:24	05/15/23 05:58		
Zinc	146	ug/L	34.4	10.3	1	05/01/23 06:24	05/15/23 05:58	7440-66-6	
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 18:19	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/01/23 18:19	79-00-5	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/01/23 18:19	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/01/23 18:19	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/01/23 18:19	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/01/23 18:19	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 18:19	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/01/23 18:19	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/01/23 18:19	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/01/23 18:19	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/01/23 18:19	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/01/23 18:19	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/01/23 18:19	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/01/23 18:19	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 18:19	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/01/23 18:19	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/01/23 18:19	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/01/23 18:19	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/01/23 18:19	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/01/23 18:19	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/01/23 18:19	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/01/23 18:19	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/01/23 18:19	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/01/23 18:19	124-48-1	

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ANALYTICAL RESULTS

Project: 58197097 DELAFIELD LANDFILL

Pace Project No.: 40261434

Sample: LOT 15 **Lab ID: 40261434008** Collected: 04/27/23 13:00 Received: 04/28/23 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/01/23 18:19	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/01/23 18:19	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/01/23 18:19	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/01/23 18:19	1634-04-4	L2
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/01/23 18:19	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/01/23 18:19	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/01/23 18:19	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/01/23 18:19	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/01/23 18:19	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/01/23 18:19	108-88-3	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		05/01/23 18:19	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/01/23 18:19	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/01/23 18:19	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/01/23 18:19	1330-20-7	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/01/23 18:19	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/01/23 18:19	10061-01-5	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		05/01/23 18:19	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		05/01/23 18:19	95-47-6	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/01/23 18:19	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/01/23 18:19	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-130		1		05/01/23 18:19	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		05/01/23 18:19	2199-69-1	
Toluene-d8 (S)	91	%	70-130		1		05/01/23 18:19	2037-26-5	
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	186	mg/L	20.0	4.3	10		05/01/23 15:16	16887-00-6	M0,R1
Nitrate as N	5.6	mg/L	1.5	0.44	10		05/01/23 15:16	14797-55-8	H5,M0,R1
Nitrite as N	<0.021	mg/L	0.10	0.021	1		04/28/23 19:53	14797-65-0	M0
Sulfate	25.7	mg/L	2.0	0.44	1		04/28/23 19:53	14808-79-8	
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	345	mg/L	25.0	7.4	1		05/10/23 10:31		
335.4 Cyanide, Total									
Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Pace Analytical Services - Green Bay									
Cyanide	<0.0069	mg/L	0.023	0.0069	1	05/09/23 14:30	05/09/23 16:43	57-12-5	
351.2 Total Kjeldahl Nitrogen									
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2									
Pace Analytical Services - Green Bay									
Nitrogen, Kjeldahl, Total	<0.21	mg/L	1.0	0.21	1	05/02/23 20:50	05/03/23 01:42	7727-37-9	

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