

FR Addendum No. 1 Tables

(Table number corresponds with WDNR incompleteness comment number)

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Table 9-1. Borings Extending Into Bedrock Five or More Feet
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Boring ID	Bedrock Interval* (ft. bgs)	Continuously Cored Interval per NR 507.05** (ft. bgs)
B-2A	19 -36	19 -36
B-4R	11.5 - 34	24 - 34
B-5A	19 - 36	19 -36
B-6A	18.5 - 35	25.5 - 35
B-6AR	17.5 - 34.3	19.5 - 34.3
B-11	4.5 - 41	29 - 41
MW-109A	29 - 71.5	33.5 - 71.5
B-109AR	28.5 - 69.8	34.2 - 69.8
MW110A	22 - 56	22 - 55
B-111C	19.5 - 41.4	22.5 - 41.4
B-112C	11 - 43	15 - 43
MW-113A	21.4 - 68	25 - 68
MW-114A	12.25 - 50	20 - 50
B-115C	10 - 40	12 - 40
MW-116A	9 - 60.4	23 - 60.4
MW-117A	24.5 - 51	30.5 - 50.75
MW-118A	9 - 52.8	47 - 52.8
MW-120A	18.5 - 50.5	19.5 - 50.5
B-120AR-1	19.5 - 30	20 - 30
B-120AR-2	15.4 - 30	25 - 30
B-120AR-3	17.5 - 29	19 - 29
B-121C	6 - 41	12.5 - 41
MW-123A	6 - 93	35 - 93
B-217C	31 - 51.5	31.5 - 51.5
B-218C	13 - 40.6	14.6 - 40.6
B-219C	32 - 50	35 - 50
B-219CR	33 - 53.8	34.5 - 53.8
B-220C	8 - 44	10 - 44
B-222C	17 - 43	20 - 43
B-223C	23.5 - 40.8	29.6 - 40.8
B-224C	18 - 46	22 - 46
B-224CR	19.8 - 48.1	24 - 48.1
B-225C	19.5 - 40.6	32 - 40.6
B-226C	9 - 40.7	11.2 - 40.7
B-PWC-2	20 - 49	30 - 49
Borings Extending into Bedrock Five or More Feet - Split-Barrel OR Direct-Push Sampled		
B-7	29.5 - 43.5	38.5 - 43.5
B-8	23.5 - 30	0
B-10	11.5 - 53.6	0
B-10R	11 - 53.5	25 - 30, 38 - 40
MW-119	7.5 - 49	0
B-122	16 - 43	0
MW-125A	23 - 58.7	0
B-221C	19.5 - 40	0
DP-6X	5.3 - 10.3	0
DP-7	10 - 18.5	0
DP-8	5.5 - 13.3	0
DP-30	3 - 8	0
DP-31	5 - 21	0
DP-32	4 - 12	0
DP-36	6.5 - 16	0
DP-38	21.5 - 28	0
B-PWC-1	13 - 24	0

Abbreviations:
bgs = below ground surface

* Top of rock may have been determined from a shallower boring installed at the location of the boring listed. Auger refusal is interpreted to indicate the top of the bedrock if samples were not collected at that interval.

** Fracture frequency, rock quality designation and percent recovery noted on boring logs.

Created By: ACW, 5/14/2024

Revised/Checked By: BJS 5/16/2024; 7/8/2024, 1/8/2025; JR, 1/8/2025; BJS, 1/29/2025

Table 10-1. Vertical Hydraulic Gradients - High and Low Water Table Events (March & December 2023)
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
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Well Nest	Screened Geologic Unit	Measurement Date	Well	Groundwater Elevation (h) (ft amsl)	Reference Point (L) (ft amsl)	Dh (ft)	DL (ft)	Vertical Gradient (i) (Dh/DL)	Vertical Flow Direction
MW-105 MW-105A	Loess, Outwash, & Till Weathered Dolomite	3/29/2023	water table	866.92	859.80	0.75	36.60	0.020	Down
		12/4/2023	piezometer	866.17 863.21 863.10	823.20 859.01 823.20	0.11	35.80	0.003	Down
MW-109 MW-109A	Till, Weathered Dolomite & Dolomite (Galena Fm.) Dolomite (Galena Fm.)	3/29/2023	water table	869.58	864.79	-0.91	36.49	-0.025	Up
		12/4/2023	piezometer	870.49 865.60 866.63	828.30 862.80 828.30	-1.03	34.50	-0.030	Up
MW-110 MW-110A	Till Sandstone (Glenwood Fm.)	3/29/2023	water table	887.25	880.50	2.35	36.50	0.064	Down
		12/4/2023	piezometer	884.90 882.13 879.96	844.00 878.82 844.00	2.17	34.82	0.062	Down
MW-113 MW-113A	Dolomite (Galena Fm.) Dolomite (Platteville Fm. & Sandstone (Glenwood Fm.))	3/29/2023	water table	896.36	885.40	0.74	32.80	0.023	Down
		12/4/2023	piezometer	895.62 892.32 890.94	852.60 885.40 852.60	1.38	32.80	0.042	Down
MW-114 MW-114A	Loess, Till & Sandstone (Tonti Member) Dolomite (Shakopee Fm.)	3/29/2023	water table	896.00	887.30	1.51	36.70	0.041	Down
		12/4/2023	piezometer	894.49 893.26 890.76	850.60 887.30 850.60	2.50	36.70	0.068	Down
MW-116 MW-116A	Sandstone (Tonti Member) Sandstone (Tonti Member)	3/29/2023	water table	885.55	880.98	0.11	36.68	0.003	Down
		12/4/2023	piezometer	885.44 880.76 880.70	844.30 878.58 844.30	0.06	34.28	0.002	Down
MW-117 MW-117A	Till Dolomite (Oneota Fm.)	3/29/2023	water table	899.51	889.80	-1.12	37.60	-0.030	Up
		12/4/2023	piezometer	900.63 895.64 894.76	852.20 889.80 852.20	0.88	37.60	0.023	Down
MW-118 MW-118A	Till & Sandstone (Tonti Member) Variable Lithology (Readstown Member) & minor Dolomite (Prairie du Chien Gr.)	3/29/2023	water table	900.31	891.90	2.28	33.60	0.068	Down
		12/4/2023	piezometer	898.03 893.99 891.34	858.30 890.45 858.30	2.65	32.15	0.082	Down
MW-120 MW-120A	Till Dolomite (Oneota Fm.)	3/29/2023	water table	905.20	897.20	0.69	36.40	0.019	Down
		12/4/2023	piezometer	904.51 897.71 897.56	860.80 894.96 860.80	0.15	34.16	0.004	Down

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Well Nest	Screened Geologic Unit	Measurement Date	Well	Groundwater Elevation (h) (ft amsl)	Reference Point (L) (ft amsl)	Dh (ft)	DL (ft)	Vertical Gradient (i) (Dh/DL)	Vertical Flow Direction
MW-123	Sandstone (Tonti Member)	3/29/2023	water table	879.48	879.44	6.58	26.94	0.244	Down
MW-123A	Dolomite (Shakopee Fm.)	12/4/2023	piezometer	872.90	852.50	7.14	26.92	0.265	Down
			piezometer	872.30	852.50				
MW-124	Dolomite (Oneota Fm.)	3/29/2023	water table	904.71	900.46	1.00	35.96	0.028	Down
MW-124A	Dolomite (Oneota Fm.)	12/4/2023	piezometer	903.71	864.50	4.39	32.74	0.134	Down
			piezometer	898.27	897.24				
			piezometer	893.88	864.50				
MW-125	Till, Variable Lithology (Readstown Member) & Dolomite (Prairie du Chien Gr.)	3/29/2023	water table	899.52	891.70	-0.06	28.10	-0.002	Up
MW-125A	Dolomite (Prairie du Chien Gr.)	12/4/2023	piezometer	899.58	863.60	-0.31	25.73	-0.012	Up
			piezometer	891.95	889.33				
			piezometer	892.26	863.60				

Abbreviations:

ft = feet

amsl = above mean sea level

Notes

1. Groundwater elevations (h) were recorded by SCS Engineers. Measurements were taken from the top of casing and are referenced to the mean sea level datum.
2. The reference point (L) is the elevation of the midpoint of the saturated zone of the well screen.
3. Screen interval and ground surface elevations taken from well construction forms.
4. Dh is the difference between the water table elevation and potentiometric surface elevation.
4. DL is the distance between the reference point (L) of the well screen and the reference point (L) of the piezometer screen.

Created by: JR	Date: 5/3/2023
Last revision by: EMS	Date: 3/28/2024
Checked by: JR	Date: 4/1/2024

I:\25222268.00\Deliverables\Feasibility Report Addendum 1\Tables\Final\[10-1 Vertical Hydraulic Gradients - High & Low Water Table Events Revised 8-7-2024.xlsx]Calculations

Table 10-2. Detection Monitoring Parameters (Other Than VOCs) with Geologic Units Noted
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
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Sample	Date	Alkalinity (mg/L)	Chloride (mg/L)	Hardness (mg/L)	Field Conductivity (µmhos/cm)	Field pH (Std. Units)	Field Temperature (C°)	Groundwater Elevation (feet amsl)
MW-1 Loess, Outwash	3/4/2024	427	7.1 M0	460	732.0	7.27	10.1	865.54
	4/4/2024	412	9.9	485	757.0	7.68	8.9	867.46
	5/6/2024	420	9.4	403	695.4	6.96	10	867.66
	6/12/2024	400	8.4	403	738.0	7.39	14.9	869.03
	7/12/2024	401	9.5	406	673.0	7.25	12.4	869.76
MW-1 DUP	3/4/2024	407	7.1	463	--	--	--	--
	4/4/2024	413	9.9	490	--	--	--	--
	5/6/2024	412	9.4	418	--	--	--	--
MW-3 Till	5/3/2023	362	10.5	440	735.0	7.37	9.5	892.07
	6/9/2023	379	9.3	418	725.0	7.29	9.2	890.24
	7/11/2023	377	9.8	393	604.0	7.45	10.1	888.82
	8/17/2023	367	9.9	429	710.0	7.2	10.3	887.74
	12/6/2023	362	10.6	413	676.9	7.32	10.9	885.59
	3/7/2024	385	11	445	757.0	7.41	10	886.75
	6/12/2024	373	10.8	393	792.0	7.42	13.9	891.92
MW-4 Sandstone (Readstown Member) & Dolomite (Oneota Fm)	5/3/2023	312	5.8	334	617.5	7.6	8.8	903.93
	6/9/2023	298	4.1	304	533.5	6.8	9.3	902.38
	7/11/2023	304	4.8	293	462.0	7.54	10.9	900.84
	8/16/2023	265	3.4	285	516.2	7.32	11.5	894.99
	12/5/2023	290	3.7	310	532.7	7.36	11.6	897.34
	3/7/2024	304	4.2 B	342	566.0	7.51	10.3	899.38
	6/12/2024	293	3.2	291	537.6	7.51	13.8	907.84
MW-105 Loess, Outwash Till	5/3/2023	290	6.8	308	556.9	6.93	8.6	865.47
	6/8/2023	315	8.7	326	788.0	7.51	10.7	864.43
	7/10/2023	320	7.6	292	609.0	7.09	18.2	863.57
	8/17/2023	315	7.1	320	578.1	7.38	12.7	863.68
	12/5/2023	331	7.0	344	571.6	7.48	11.0	863.21
	3/6/2024	315	4.7 B	309	673.0	7.15	8.7	863.99
	6/12/2024	272	3.5	233	555.0	7.64	12.2	866.59
MW-105A Weathered Dolomite	5/3/2023	378	15.1	432	1034.0	7.36	9.5	865.25
	6/8/2023	382	12	400	866.0	7.68	10.6	864.25
	7/10/2023	372	8.8	386	760.0	7.73	14.3	863.51
	8/17/2023	360 M0	11	968	810.0	7.47	12.3	863.55
	12/5/2023	371	9.5	403	767.0	7.69	10.5	863.10
	3/6/2024	375	8.5	415	748.0	7.26	11.8	863.70
	6/12/2024	368	10.0	361	756.0	7.97	15.9	865.72
MW-105A DUP	6/12/2024	368	8.0	364	--	--	--	--
MW-106 Loess, Till	5/2/2023	441	22.2	471	843.0	7.32	8.3	866.59
	6/8/2023	429	24	472	793.0	7.11	9.7	865.76
	7/10/2023	415	20.8	475	786.0	7.29	11.3	865.10
	8/15/2023	411	24.6	456	849.0	6.91	13.2	865.50
	12/5/2023	353	58.2	442	536.2	7.17	11.4	864.65
	3/6/2024	388	46.4	465	878.0	6.87	9.4	865.15
	6/11/2024	441	23.1	458	908.0	6.72	11.3	865.15
MW-106 DUP	5/2/2023	453	21.3	441	--	--	--	--

Table 10-2. Detection Monitoring Parameters (Other Than VOCs) with Geologic Units Noted
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
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Sample	Date	Alkalinity (mg/L)	Chloride (mg/L)	Hardness (mg/L)	Field Conductivity (µmhos/cm)	Field pH (Std. Units)	Field Temperature (C°)	Groundwater Elevation (feet amsl)
MW-107 Till	5/2/2023	347	5.2 M0	353	607.6	7.39	8.6	867.19
	6/8/2023	363	4.5	367	595.2	7.5	10.9	866.92
	7/10/2023	363	4.3	353	600.0	7.44	11.7	866.43
	8/15/2023	349	2.8	350	622.0	7.36	12.8	866.99
	12/5/2023	348	2.4	361	593.4	7.59	11.7	866.19
	3/5/2024	357	3.0 B	376	634.0	7.66	9.7	866.81
	6/11/2024	359	4.0	339	630.0	7.43	11.8	870.46
MW-108 Till	5/2/2023	280	8.1	288	526.8	7.44	8.6	867.54
	6/9/2023	357	9.8	360	565.6	7.36	9.5	866.10
	7/10/2023	392	9.3	387	649.0	7.42	10.5	865.00
	8/17/2023	374	10.6	374	640.7	7.24	11.9	864.74
	12/5/2023	370	12.2	378	629.9	7.4	11.1	864.04
	3/6/2024	372	11.1	401	585.0	6.92	9.6	864.98
	6/12/2024	345	9.5	309	659.5	7.55	12.2	868.69
MW-111 Till, Outwash	5/2/2023	264	4.5	269	474.3	7.39	8.4	878.13
	6/8/2023	345	6.1	347	589.5	7.45	9.2	875.69
	7/10/2023	351	6.5	334	611.0	7.35	9.0	895.03
	8/15/2023	330	7.1	358	681.0	7.22	10.9	875.99
	12/5/2023	327	5.8	328	539.3	7.37	10.3	874.80
	3/5/2024	356	6.3 B	387	651.0	7.55	8.8	875.03
	6/12/2024	323	4.7	309	583.4	7.12	12.4	877.18
MW-113 Dolomite (Galena Fm.)	5/2/2023	360	7.7	399	761.0	7.22	10.4	895.82
	6/8/2023	373	6.9	411	771.0	7.23	10.0	894.61
	7/11/2023	370	7.3	408	644.0	7.26	11.4	893.83
	8/17/2023	365	8.0	384	750.0	7.22	11.0	893.57
	12/6/2023	365	8.1	406	726.0	6.57	10.0	892.32
	3/6/2024	355	6.5 B	390	746.0	7.07	11.1	893.60
	6/12/2024	369	6.0	359	711.0	7.54	14.2	896.68
	7/12/2024	--	--	--	740.0	7.07	11.0	897.07
MW-113 DUP	6/8/2023	373	6.8	396	--	--	--	--
	7/11/2023	376	6.5	396	--	--	--	--
	8/17/2023	364	8.0	408	--	--	--	--
	12/6/2023	365	8.1	420	--	--	--	--
	3/6/2024	352	6.6	395	--	--	--	--
MW-113A Dollomite (Platteville Fm.) Sandstone (Glenwood Fm.)	5/2/2023	332	9.3	419	685.3	7.29	10.5	895.14
	6/9/2023	345	8.9 J	404	691.0	7.30	11.1	893.77
	7/11/2023	343	8.3	391	588.0	7.60	11.5	883.54
	8/17/2023	334	9.3 J, D3	377	631.3	7.27	11.6	892.31
	12/6/2023	338	9.0	391	647.8	6.83	10.0	890.94
	3/6/2024	345	8.6	426	700.0	7.07	10.9	892.19
	6/12/2024	337	8.1	385	708.0	7.55	13.9	895.68
MW-116 Sandstone (Tonti Member)	5/2/2023	404	5.6	410	707.5	7.05	9.0	886.02
	6/8/2023	404 M0	4.9	417	671.4	7.30	9.8	884.81
	7/11/2023	410	4.1	387	599.0	6.96	11.3	883.54
	8/16/2023	399	4.0	401	687.0	7.02	11.8	882.55
	12/5/2023	401	3.6	400	678.4	7.22	11.1	880.76
	3/5/2024	390	3.7 B	416	744.0	7.40	9.4	880.47
	6/11/2024	398	4.7	374	710.0	7.32	11.7	884.54

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Sample	Date	Alkalinity (mg/L)	Chloride (mg/L)	Hardness (mg/L)	Field Conductivity (µmhos/cm)	Field pH (Std. Units)	Field Temperature (C°)	Groundwater Elevation (feet amsl)
MW-116A Sandstone (Tonti Member)	5/2/2023	338	4.9	361	648.7	7.07	9.4	885.89
	6/8/2023	351	4.2	361	612.8	7.21	11.4	884.70
	7/11/2023	354	3.9	347	530.0	7.04	11.0	883.45
	8/16/2023	332	4.4	343	363.9	6.95	10.9	882.35
	12/5/2023	340	4.0	359	548.9	7.04	10.5	880.70
	3/5/2024	347	4.0 B	377	651.0	7.25	10.9	880.41
	6/11/2024	343	4.3	339	641.4	7.30	11.6	884.43
MW-116A DUP	5/2/2023	362	4.9	317	--	--	--	--
	6/11/2024	344	4.0	341	--	--	--	--
MW-119 Sandstone (Tonti Member)	5/2/2023	356	2.2	355	619.3	6.97	11	887.99
	6/8/2023	386	2 J	378	596.7	7.30	9.9	888.68
	7/10/2023	376	2.5	347	624.0	7.19	10.6	888.08
	8/16/2023	362	2.5	365	630.4	7.04	11.3	887.30
	12/5/2023	357	3.1	371	604.9	7.28	10.7	885.08
	3/5/2024	356	3.1 B	375	634.0	7.59	12.0	883.41
	6/11/2024	355	3.0	339	629.1	7.53	12.1	885.50
MW-120 Till	5/2/2023	334	5.1	394	585.4	7.38	8.8	903.89
	6/9/2023	346	5.2	329	584.8	7.29	10.7	902.20
	7/11/2023	340	5.3	309	468.0	7.49	13.1	900.55
	8/17/2023	329	5.2	333	566.6	7.26	14.7	899.91
	12/5/2023	323	5.9	321	550.8	7.47	11.6	897.71
	3/7/2024	329	6.2 B	347	570.0	7.54	8.8	899.65
	6/12/2024	329	5.0	310	584.9	7.85	15.0	899.65
MW-120 DUP	6/9/2023	345	5.2	330	--	--	--	--
MW-120A Dolomite (Oneota)	5/2/2023	351	30.3	360	878.0	7.28	10.9	903.81
	6/9/2023	346	8.8 J, D3	352	727.0	7.37	14.2	902.14
	7/11/2023	354	8.3	358	591.0	7.30	13.8	900.47
	8/17/2023	341	9.5	338	588.2	7.24	12.1	899.61
	12/5/2023	354	9.5	362	714.0	7.36	10.6	897.56
	3/7/2024	350	7.0	389	693.0	7.67	11.4	899.39
	6/12/2024	354	8.1	342	715.0	7.61	13.8	903.17
MW-120A DUP	7/11/2023	356	8.6	363	--	--	--	--
	8/17/2023	341	8.6	371	--	--	--	--
MW-121 Till, Sandstone (Tonti Member) Dolomite (Oneota Fm.)	5/2/2023	316	6.1	349	597.6	7.47	9.6	903.37
	6/9/2023	345	5.8	351	606.6	7.36	10.6	901.82
	7/11/2023	338	5.5	488	530.0	7.31	12.4	900.38
	8/16/2023	336	6.5	352	631.0	7.22	14.6	899.67
	12/5/2023	341	6.1	351	590.4	7.31	11.5	897.54
	3/7/2024	349	6.0	394	644.0	7.51	8.6	899.65
	6/12/2024	321	8.0	322	613.0	7.55	17.2	903.56
MW-122 Till	5/2/2023	399	5.3 J, D3	468	1047.0	7.47	8.1	903.07
	6/8/2023	446	3.4 J, D3	360	797.0	7.46	9.7	900.77
	7/11/2023	458	3.1	359	683.0	7.43	11.7	899.10
	8/16/2023	277	1.9 J	212	628.3	7.51	12.3	898.22
	12/5/2023	425	3.1	330	814.0	7.21	10.4	895.97
	3/6/2024	475	1.1 J	442	778.0	6.88	9.8	898.09
	6/12/2024	324	1.1 J1	228	721.0	7.65	12.5	904.13
MW-122 DUP	12/5/2023	425	3.2	326	--	--	--	--
	3/6/2024	476	1.2 J	444	--	--	--	--

Table 10-2. Detection Monitoring Parameters (Other Than VOCs) with Geologic Units Noted
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1

Sample	Date	Alkalinity (mg/L)	Chloride (mg/L)	Hardness (mg/L)	Field Conductivity (µmhos/cm)	Field pH (Std. Units)	Field Temperature (C°)	Groundwater Elevation (feet amsl)
MW-123 Sandstone (Tonti Member)	5/3/2023	329	2.5	352	630.6	7.37	12.3	880.53
	6/8/2023	357	1.8 J	375	624.9	7.43	11.8	884.20
	7/11/2023	361	1.8 J	359	545.0	7.27	11.1	884.47
	8/16/2023	352	1.5 J	363	620.0	7.32	12.7	883.12
	12/5/2023 **	--	--	--	--	--	--	879.44
	3/5/2024**	--	--	--	--	--	--	879.09
MW-123A Dolomite (Shakopee Fm.)	5/3/2023	318	6.9	359	652.9	7.11	11.6	874.46
	6/8/2023	342	6.1	397	628.4	7.58	13.3	875.35
	7/11/2023	348	6.0	369	569.0	7.63	11.5	875.15
	8/16/2023	341	6.5	367	680.0	7.42	12.1	874.35
	12/5/2023	335	6.1	375	652.4	7.36	10.1	872.30
	3/6/2024	341	5.9	398	687.0	7.56	10.8	871.13
	6/11/2024	334	5.6	356	662.1	7.56	12.0	871.20
MW-123B Variable Lithology (Readstown Member)	6/8/2023	333	1.6 J	323	563.1	7.34	12.3	--
	7/11/2023	337	1.6 J	312	494.0	7.20	13.1	883.72
	8/16/2023	327	2.3	322	600.4	7.07	15.5	882.26
	9/21/2023	338	3.4	317	615.4	7.20	10.8	880.86
	12/5/2023	334	5.9	350	615.2	7.29	9.9	878.73
	3/6/2024	343	3.2	362	622.0	7.47	11.2	872.11
	6/12/2024	336	3.0	326	601.3	7.36	12.2	872.05
MW-123B DUP	9/21/2023	343	3.4	324	--	--	--	--
MW-124 Dolomite (Oneota Fm.)	5/3/2023	355	7.7	394	669.1	7.42	9.5	903.98
	6/9/2023	391	7.4	422	710.0	7.44	9.9	902.77
	7/11/2023	393	8.3	414	609.0	7.84	12.9	901.48
	8/17/2023	386	8.8	416	717.0	7.10	11.8	900.72
	12/5/2023	419	8.4	432	738.0	7.42	11.3	898.27
	3/7/2024	429	7.2	472	779.0	7.46	10.5	900.80
	6/12/2024	348	10.1	348	642.4	7.59	11.8	905.02
MW-124A Dolomite (Oneota Fm.)	5/3/2023	345	9.9	342	701.0	7.49	11.1	903.75
	6/9/2023	376	21.2	357	762.0	7.42	11.6	896.16
	7/11/2023	357	10.3	362	633.0	7.48	13.4	898.90
	8/17/2023	342	10.2	368	717.0	7.13	13.5	897.42
	12/5/2023	334	7.7	344	630.3	7.37	10.7	893.88
	3/7/2024	352	16.9	425	757.0	7.57	12.9	896.07
	6/12/2024	345	8.6	353	731.0	7.48	14.8	903.94
MW-124A DUP	6/12/2024	354	11.6	359	--	--	--	--
MW-125 Till, Variable Lithology (Readstown Member), Dolomite (Prairie du Chien)	5/2/2023	378	3.7	382	683.6	7.22	9.7	900.33
	6/8/2023	400	4.7	424	664.5	7.43	10.2	896.97
	7/11/2023	392	4.5	412	592.0	7.68	11.4	895.50
	8/16/2023	388	5.5	420	707.0	7.30	11.0	894.00
	12/5/2023	391	6.3	393	739.0	6.57	10.5	891.95
	3/6/2024	395	6.4	454	797.0	6.98	10.5	892.86
	6/12/2024	391	3.9	380	718.0	7.31	12.6	899.59

Table 10-2. Detection Monitoring Parameters (Other Than VOCs) with Geologic Units Noted
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1

Sample	Date	Alkalinity (mg/L)	Chloride (mg/L)	Hardness (mg/L)	Field Conductivity (µmhos/cm)	Field pH (Std. Units)	Field Temperature (C°)	Groundwater Elevation (feet amsl)
MW-125A Dolomite (Prairie du Chien)	5/2/2023	339	5	356	660.5	7.29	10.8	899.60
	6/8/2023	363	6.1	380	629.1	7.65	12.0	898.00
	7/11/2023	352	3.9	371	558.0	7.63	13.0	895.58
	8/16/2023	340	4.2	573	624.8	7.32	13.2	894.36
	12/5/2023	342	4.2	370	639.2	7.20	10.3	892.26
	3/6/2024	342	4.1	394	641	7.15	11.4	893.59
	6/12/2024	338	4.0	345	643	7.59	14.6	899.83
NR 140 Enforcement Standards (ESs)		NA	250	NA	NA	NA	NA	NA
NR 140 Preventive Action Limits (PALs)		NA	125	NA	NA	NA	NA	NA

Abbreviations:

amsl = above mean sea level

mg/L = milligrams per liter or parts per million (ppm)

µmhos/cm = micromhos per centimeter

C° = degrees Celsius

-- = Not Measured

NA = Not Applicable

Notes:

NR 140 ESs and PALs- Wisconsin Administrative Code (WAC), Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2023.

Bold+underlined values meet or exceed NR 140 enforcement standards.

Italic+underlined values meet or exceed NR 140 preventive action limits.

** MW123 did not have enough water to collect a sample.

Geologic description for MW-4 was revised based on the B-4R boring log.

Laboratory Notes/Qualifiers:

D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ).

J1 = The reported result is an estimated value.

M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Created by:	JR	5/24/2023
Last revision by:	BJS	1/23/2025
Checked by:	BLP	1/31/2025
Proj Mgr QA/QC:	BLP	1/31/2025

I:\25222268.00\Deliverables\Feasibility Report Addendum 1\Tables\Final\[10-2_Detection Monitoring Parameters (Except VOCs) with Geologic Units Noted_Final.xlsx]Detection

**Table 10-3a. Single Well Hydraulic Conductivity Test Results - Wells in Outwash & Loess
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1**

Monitoring Well Piezometers	Hydraulic Conductivity (Kh) (cm/s)	Lithology within Screen Interval	USCS & Rock Unit
MW-1	4.5E-03	Loess and Outwash	ML, CL, and SP-SM
MW-105	5.2E-04	Loess, Outwash, and Till	CL, SP, SM
MW-106	5.3E-04	Loess and Till	CL and SM
MW-111	2.2E-03	Till & Outwash	SM, SP-SM
MW-117	3.7E-04	Loess and Till	CH and SM
Minimum	3.7E-04		
Maximum	4.5E-03		
Geometric Mean	1.0E-03		

Created by BJS 10/02/2023

Checked by JR, 11/14/2023

Table 10-3b. Single Well Hydraulic Conductivity Test Results - Wells in Till
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1

Monitoring Wells & Piezometers	Hydraulic Conductivity (Kh) (cm/s)	Lithology within Screen Interval	USCS & Rock Unit
MW-2	1.7E-04	Till	SM
MW-3	1.6E-03	Till	SM
MW-107	5.2E-04	Till	SM
MW-108	3.6E-04	Till	SM
MW-110	1.0E-03	Till	SM
MW-117	3.7E-04	Loess and Till	CH and SM
MW-120	2.4E-04	Till	SM
MW-122	1.1E-04	Till	SM
Minimum	1.1E-04		
Maximum	1.6E-03		
Geometric Mean	3.9E-04		

Created by: BJS, 10/02/2023

Checked by: JR, 11/14/2023

Table 10-4. Single Well Hydraulic Conductivity Test Results - Wells in Sinnipee Group (Galena Formation)
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1

Monitoring Well	Hydraulic Conductivity (K_h) (cm/s)	Lithology within Screen Interval	USCS Soil Type and/or Rock Unit
MW-109	2.1E-03	Till, Weathered Dolomite, and Dolomite (Galena Fm.)	SM, SM, and DL1
MW-109A	1.4E-03	Dolomite (Galena Fm.)	DL1
MW-112	7.5E-03	Till and Weathered Dolomite (Galena Fm.)	SM and SM
MW-113	4.5E-04	Dolomite (Galena Fm.)	DL1
Minimum	4.5E-04		
Maximum	7.5E-03		
Geometric Mean	1.8E-03		

Created by:	<u>ACW</u>	Date:	<u>9/28/2023</u>
Checked by:	<u>BJS</u>	Date:	<u>5/17/2024</u>

Table 10-5. Single Well Hydraulic Conductivity Test Results - Wells in Ancell Group, St. Peter Formation, Tonti Member (Sandstone)

Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00

Feasibility Report Addendum No. 1

Monitoring Wells & Piezometers	Hydraulic Conductivity (Kh) (cm/s)	Lithology within Screen Interval	USCS & Rock Unit
MW-116	4.5E-04	Sandstone (Tonti Member)	SS2
MW-116A	4.0E-03	Sandstone (Tonti Member)	SS2
MW-119	3.2E-03	Sandstone (Tonti Member)	SS2
MW-121	4.5E-04	Till, Sandstone (Tonti Member), and Dolomite (Oneota Fm.)	SM, SS2, and DL4
MW-123	2.4E-04	Sandstone (Tonti Member)	SS2
Minimum	2.4E-04		
Maximum	4.0E-03		
Geometric Mean	9.1E-04		

Checked by BJS 10-2-2023

Checked by JR, 11/14/2023

Table 10-6. Single Well Hydraulic Conductivity Test Results - Wells in Ancell Group, St. Peter Formation, Readstown Member (Sandstone)

**Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1**

Monitoring Wells & Piezometers	Hydraulic Conductivity (Kh) (cm/s)	Lithology within Screen Interval	USCS & Rock Unit
MW-118A	8.0E-05	Variable Lithology (Readstown Member) & minor Dolomite (Prairie du Chien Gr.)	SS3 and DL5
MW-123B	5.4E-04	Variable Lithology (Readstown Member)	SS3
MW-125	2.6E-04	Till, Variable Lithology (Readstown Member), and Dolomite (Prairie du Chien Gr.)	SM, SS3, and DL5
Minimum	8.0E-05		
Maximum	5.4E-04		
Geometric Mean	2.2E-04		

Checked by BJS 10-2-2023

Checked by JR, 11/14/2023

**Table 10-7. Single Well Hydraulic Conductivity Test Results - Wells in Prairie du Chien Group
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1**

Monitoring Well	Hydraulic Conductivity (K_h) (cm/s)	Lithology within Screen Interval	USCS Soil Type and/or Rock Unit
MW-4	4.4E-02	Sandstone (Readstown Memb.) Dolomite (Oneota Fm.)	SS3, DL4
MW-114A	9.6E-04	Dolomite (Prairie du Chien Gr., Shakopee Fm.)	DL3
MW-117A	1.9E-04	Dolomite (Oneota Fm.)	DL4
MW-120A	1.8E-04	Dolomite (Oneota Fm.)	DL4
MW-123A	8.0E-06	Dolomite (Shakopee Fm.)	DL3
MW-124	1.1E-03	Dolomite (Oneota Fm.)	DL4
MW-124A	9.6E-05	Dolomite (Oneota Fm.)	DL4
MW-125A	3.2E-04	Dolomite (Prairie du Chien Gr.)	DL5
Minimum	8.0E-06		
Maximum	4.4E-02		
Geometric Mean	3.7E-04		

Geologic description for MW-4 was revised based on the B-4R boring log.

Created by:	ACW	Date:	9/28/2023
Checked by:	JR, BJS	Date:	1/23/2025

Table 10-8. Yahara Hills Golf Course Well Pumping Data
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1

FR Well Name	PW-A	PW-B	PW-C	PW-D	PW-E
High Capacity Well #	1668	77022	77023	77020	77021
WUWN	KU336	EZ086	8AP357	8AP358	FF204
WG&NHS Geologic Log	--	DN-987	DN-988	DN-985	DN-986
Use	Irrigation	Restrooms	Former Irrigation	Maintenance Shop	Restrooms
Max. Approved (gpm)	800	15	300	16	16
Total Depth	895'	330'	890'	360'	455'
Open (uncased) hole diameter	9"	6"	12" to 750"; 10" to 890'	6"	6"
Flow Tracking Method	Totalizing Flow Meter	Totalizing Flow Meter	--	Estimated*	Totalizing Flow Meter
Year	Total gallons pumped	Total gallons pumped	Total gallons pumped	Total gallons pumped	Total gallons pumped
2014	21,630,000	5,188	0	42,860	5,775
2015	30,078,000	9,000	0	47,580	9,548
2016	32,255,000	7,629	0	28,780	8,911
2017	24,117,000	4,345	0	81,100	4,084
2018	10,887,000	2,696	0	70,400	2,552
2019	13,351,000	3,870	0	62,700	3,942
2020	32,183,000	0	0	61,060	0
2021	34,548,000	10,550	0	128,960	9,870
2022	21,751,000	11,105	0	84,360	11,485
2023	36,945,000	11,410	0	126,700	9,490

Source:

WDNR Drinking & Ground Water Use Information System (<https://apps.dnr.wi.gov/waterusepub/Source>)

Notes:

FR = Feasibility Report, February 13, 2024.

WUWN = Wisconsin Unique Well Number

gpm = gallons per minute

-- Not applicable or none.

* Estimated based on number of people (2000 gal/person/month)

WG&NHS = Wisconsin Geological & Natural History Survey

PW-A is located southeast of the Proposed Landfill site in the SE 1/4, NE 1/4, Sec. 36, T7N, R10E.

PW-B is located on the City of Madison Yahara Hills Golf Course and will be maintained.

PW-C, PW-D, and PW-E are located within the Proposed Landfill footprint and will be abandoned.

Table 14-1. Groundwater Analytical Results Summary - Detected VOCs
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1
(Results are in µg/L)

Sample	Date	Lab Notes	Benzene	Toluene	1,2-Dichlorethane	Tetrachloroethene	Other VOCs
MW-1	3/4/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	4/4/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	4/4/2024 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	5/6/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	5/6/2024 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	6/12/2024	(4)	<0.30	<0.29	<u>0.79</u> J	<0.41	ND
MW-3	7/12/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	5/3/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<u>1.8</u>	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-4	8/17/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
	5/3/2023	(1)	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<u>1.4</u>	<0.41	ND
	7/11/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
MW-105	8/16/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
	5/3/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<u>0.35</u> J	<0.41	ND
	7/10/2023	(2)	<0.30	<0.29	<u>1.7</u>	<0.41	ND
MW-105A	8/17/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	5/3/2023	--	<u>0.36</u> J	<u>0.43</u> J	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<u>0.39</u> J	<0.41	ND
	7/10/2023	(2)	<0.30	<0.29	<u>1.1</u>	<0.41	ND
MW-106	8/17/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	5/2/2023 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/10/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-107	8/15/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/10/2023	--	<0.30	<0.29	<u>0.39</u> J	<0.41	ND
MW-108	8/15/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<u>0.48</u> J	<0.41	ND
	7/10/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-111	8/17/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/10/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-113	8/15/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	5/2/2023	--	<0.30	<0.29	<0.29	<u>1.1</u>	ND
	6/8/2023	--	<0.30	<0.29	<u>1.3</u>	<u>0.41</u> J	ND
	6/8/2023 (dup)	--	<0.30	<0.29	<u>1.1</u>	<0.41	ND

Table 14-1. Groundwater Analytical Results Summary - Detected VOCs
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1
(Results are in µg/L)

Sample	Date	Lab Notes	Benzene	Toluene	1,2-Dichlorethane	Tetrachloroethene	Other VOCs
MW-113 (cont.)	7/11/2023	--	<0.30	<0.29	<u>5.4</u>	0.42 J	ND
	7/11/2023 (dup)	--	<0.30	<0.29	<u>4.4</u>	<0.41	ND
	8/17/2023	--	<0.30	<0.29	<u>1.1</u>	<0.41	ND
	8/17/2023 (dup)	--	<0.30	<0.29	<u>1.2</u>	<u>0.51</u> J	ND
	12/6/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	12/6/2023 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	3/6/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	3/6/2024 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	6/12/2024	(4)	<u>12.7</u>	0.72 J1	<0.29	<0.41	ND
	7/12/2024	--	<0.30	<0.29	<0.29	<0.41	ND
MW-113A	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<u>0.9</u> J	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/17/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
MW-116	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<u>0.49</u> J	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/16/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-116A	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	5/2/2023 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<u>0.4</u> J	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/16/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-119	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/10/2023	--	<0.30	<0.29	<u>0.94</u> J	<0.41	ND
	8/16/2023	(2)	<0.30	<0.29	<u>0.47</u> J	<0.41	ND
MW-120	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<u>0.61</u> J	<0.41	ND
	8/17/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-120A	5/2/2023	--	<0.30	<0.29	<0.29	<u>0.47</u> J	ND
	6/9/2023	--	<0.30	<0.29	<u>1</u>	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<u>1.6</u>	<0.41	ND
	7/11/2023 (dup)	--	<0.30	<0.29	<0.29	<0.41	ND
	8/17/2023	--	<0.30	<0.29	<u>1.2</u>	<0.41	ND
	8/17/2023 (dup)	(2)	<0.30	<0.29	<u>1.1</u>	<0.41	ND
	12/5/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	3/7/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	6/12/2024	(4)	<0.30	<0.29	<0.29	<0.41	ND

Table 14-1. Groundwater Analytical Results Summary - Detected VOCs
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1
(Results are in µg/L)

Sample	Date	Lab Notes	Benzene	Toluene	1,2-Dichlorethane	Tetrachloroethene	Other VOCs
MW-121	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/11/2023	(3)	<0.30	<0.29	<u>0.49</u> J	<0.41	ND
	8/16/2023	(3)	<0.30	<0.29	<0.29	<0.41	ND
MW-122	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/16/2023	(3)	<0.30	<0.29	<0.29	<0.41	ND
MW-123	5/3/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<u>0.33</u> J	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/16/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-123A	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<u>2</u>	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/16/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-123B	6/8/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<u>0.77</u> J	<0.41	ND
	8/16/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	9/21/2023	--	<0.30	<0.29	<u>0.61</u> J	<0.41	ND
	9/21/2023 (dup)	--	<0.30	<0.29	<u>0.53</u> J	<0.41	ND
	12/5/2023	--	<0.30	<0.29	<0.29	<0.41	ND
MW-124	5/3/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<u>1.1</u>	<0.41	ND
	7/11/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
	8/17/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
MW-124A	5/3/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/9/2023	--	<0.30	<0.29	<u>2.8</u>	<0.41	ND
	7/11/2023	(2)	<0.30	<0.29	<u>1</u>	<0.41	ND
	8/17/2023	--	<0.30	<0.29	<u>1</u> J	<0.41	ND
	12/5/2023	--	<0.30	<0.29	<u>0.47</u> J	<0.41	ND
	3/7/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	6/12/2024	(4)	<0.30	<0.29	<0.29	<0.41	ND
	6/12/2024 (dup)	(4)	<0.30	<0.29	<0.29	<0.41	ND
MW-125	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/16/2023	--	<0.30	<0.29	<u>0.78</u> J	<0.41	ND
MW-125A	5/2/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	--	<0.30	<0.29	<u>0.83</u> J	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/16/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND

Table 14-1. Groundwater Analytical Results Summary - Detected VOCs
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1
(Results are in µg/L)

Sample	Date	Lab Notes	Benzene	Toluene	1,2-Dichlorethane	Tetrachloroethene	Other VOCs
Field Blank	3/7/2024	--	<0.30	<0.29	<0.29	<0.41	ND
Field Blank-01 (New Bailer-MW-1)	6/12/2024	(4)	<0.30	<0.29	<0.29	<0.41	ND
Field Blank-03 (Through Pump)	6/11/2024	(4)	<0.30	<0.29	<0.29	<0.41	Methylene chloride <u>0.68</u> J1
Field Blank-04 (Pump Rinse)	6/12/2024	(4)	<u>4.9</u>	<u>1.8</u>	<0.29	<0.41	Ethylbenzene <u>0.42</u> J1 Styrene <u>1.2</u>
Trip Blank	5/1/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	6/8/2023	(2)	<0.30	<0.29	<0.29	<0.41	ND
	7/11/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	8/17/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	12/5/2023	--	<0.30	<0.29	<0.29	<0.41	ND
	3/6/2024	--	<0.30	<0.29	<0.29	<0.41	ND
	7/12/2024	--	<0.30	<0.29	<0.29	<0.41	ND
NR 140 Enforcement Standards (ESs)			5	800	5	5	Ethylbenzene 700 Methylene chloride 5 Styrene 100
NR 140 Preventive Action Limits (PALs)			0.5	160	0.5	0.5	Ethylbenzene 140 Methylene chloride 0.5 Styrene 10

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)
VOCs = Volatile Organic Compounds

ND = Not Detected
(dup) = Duplicate Sample

-- = Not Applicable

Notes:

NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2023.

NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2023.

Bold+underlined values meet or exceed NR 140 ESs.

Italic+underlined values meet or exceed NR 140 PALs.

Laboratory Notes/Qualifiers:

J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ).

J1 = The reported result is an estimated value.

(1) = Surrogates 4-Bromofluorobenzene (S) = Post-analysis pH measurement indicates insufficient VOA sample preservation.

(2) = Surrogates 4-Bromofluorobenzene (S) = Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

(3) = Surrogates 4-Bromofluorobenzene (S) = Post-analysis pH measurement indicates insufficient VOA sample preservation. Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

(4) Dichlorodifluoromethane = The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.

Created by:	<u>AJR</u>	Date:	<u>1/23/2024</u>
Last revision by:	<u>JSN</u>	Date:	<u>8/2/2024</u>
Checked by:	<u>AJR</u>	Date:	<u>8/6/2024</u>
Proj Mgr QA/QC:	<u>BJS</u>	Date:	<u>8/13/2024</u>

I:\25222268.00\Deliverables\Feasibility Report Addendum 1\Tables\Final\[14-1 GW_Detected VOCs revised thru July 2024.xlsx]GW VOCs

Table 14-2. Groundwater Results - MW-122
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1
 (Results are in µg/L unless otherwise noted)

Sample	Date	Lab Notes	Public Health Parameters										Public Welfare Parameters				
			Arsenic	Barium	Cadmium	Chromium	Fluoride (mg/L)	Lead	Mercury	Nitrite + Nitrate (as N) (mg/L)	Selenium	Silver	Chloride (mg/L)	Copper	Manganese	Sulfate (mg/L)	Zinc (mg/L)
MW-122	5/2/2023	--	<u>6.5</u>	<u>561</u>	<0.30 D3	<u>16.8</u>	<0.48 D3	<u>15.6</u>	<0.066	0.81	4.8	<0.25 D3	5.3 J, D3	18.4	<u>310</u>	<u>191</u>	0.0454 J
	6/8/2023	--	0.38 J	169	<0.15	2.0 J	<0.48 D3	<0.24	<0.066	0.45	1.1	<0.13	3.4 J, D3	<1.9	<u>36.2</u>	65.5	<0.0103
	7/11/2023	--	0.68 J	177	<0.15	3.2 J	0.14 J	0.71 J	<0.066	0.39	0.73 J	<0.13	3.1	2.3 J	20.7	32.5	<0.0103
	8/16/2023	(2)	<u>14.2</u>	<u>542</u>	<0.30 D3	<u>36</u>	0.19 J	<u>23.3</u>	<0.066	0.44	5.2	<0.25 D3	1.9 J	35.7	<u>586</u>	97.2	0.0904
	12/5/2023	--	0.5 J	135	--	2.2 J	--	<0.24	--	--	--	--	3.1	--	16.5	--	--
	3/6/2024	--	0.3 J1	142	--	2.3 J1	--	<0.24	--	--	--	--	1.1 J1	--	<1.2	--	--
	6/12/2024	--	0.66 J1	85.7	--	<1.0	--	<0.24	--	--	--	--	1.1 J1	--	3.7 J1	--	--
	9/18/2024	--	<u>3.0</u>	91.1	--	<1.0	--	<0.24	--	--	--	--	1.6 J1	--	<u>983</u>	--	--
MW-122 DUP	12/5/2023	--	0.49 J	136	--	2.1 J	--	<0.24	--	--	--	--	3.2	--	6.9	--	--
	3/6/2024	--	0.31 J	136	--	2.3 J	--	<0.24	--	--	--	--	1.2 J	--	<1.2	--	--
NR 140 Enforcement Standards (ESs)			10	2,000	5	100	4	15	2	10	50	50	250	1,300	50 / 300	250	5
NR 140 Preventive Action Limits (PALs)			1	400	0.5	10	0.8	1.5	0.2	2	10	10	125	130	25 / 60	125	2.5

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)	mg/L = milligrams per liter or parts per million (ppm)	DUP = Duplicate Sample	-- = Not Analyzed
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Notes:
 NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2023 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2023.
 NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2023 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2023.

Bold+underlined values meet or exceed NR 140 enforcement standards.
Italic+underlined values meet or exceed NR 140 preventive action limits.
Manganese is regulated as both a public welfare parameter and a public health parameter under NR 140. Lower PAL/ES is welfare; higher is health.

If both the result and the PAL or ES are above the limit of detection but below the limit of quantitation, the result is not considered a PAL or ES exceedance under NR 140.14(3)(c). If the PAL or ES is below the limit of detection and the result is below the limit of quantitation, the result is not considered a PAL or ES exceedance without additional confirmation as described in NR 140.14(3)(b).

Laboratory Notes/Qualifiers:
(2) Surrogates: 4-Bromofluorobenzene - HS = Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter); pH = Post-analysis pH measurement indicates insufficient VOA sample preservation.
J = Estimated concentration at or above the Limit of Detection (LOD) and below the Limit of Quantitation (LOQ).
J1 = The reported result is an estimated value.

Created by:	<u>JR</u>	Date:	<u>5/24/2023</u>
Last revision by:	<u>LMH</u>	Date:	<u>10/30/2024</u>
Checked by:	<u>BJS</u>	Date:	<u>10/30/2024</u>
Proj Mgr QA/QC:	<u>BLP</u>	Date:	<u>10/31/2024</u>

Table 14-3. Residential Wells - Detected VOCs, 2022 - 2024
Dane County Landfill Site No. 3 / SCS Engineers Project #25222268.00
Feasibility Report Addendum No. 1
(Results are in µg/L)

Residential Well	Date	Lab Notes	Acetone	Tetrahydrofuran
Fluke	3/28/2022	--	<1.7	<1.9
	6/9/2022	--	<1.7	<u>7.2</u> J, B
	9/6/2022	--	<u>4.2</u> J	<1.9
	9/6/2022 (DUP)	--	<u>2.5</u> J	<1.9
	12/8/2022	--	<1.7	<1.9
	6/19/2023	--	<8.6	<2.4
	6/12/2024	--	<8.6	<2.4
Rathert	3/16/2022	--	<1.7	<1.9
	6/9/2022	--	<1.7	<u>7.6</u> J, B
	9/6/2022	--	<u>1.8</u> J	<1.9
	4/20/2023	--	<8.6	<2.4
	6/19/2023	--	<8.6	<2.4
	6/19/2023 (DUP)	--	<8.6	<2.4
Rogers	3/16/2022	--	<1.7	<1.9
	6/9/2022	--	<1.7	<u>6.4</u> J, B
	9/6/2022	--	<u>3.6</u> J	<1.9
	12/8/2022	--	<1.7	<1.9
	6/19/2023	--	<8.6	<2.4
	6/1/2024	--	<8.6	<2.4
Trip Blank	3/28/2022	--	<1.7	6.0 J
	6/9/2022	--	<1.7	<u>5.3</u> J
Field Blank	3/16/2022	--	<1.7	<1.9
NR 140 Enforcement Standards (ESs)			9,000	50
NR 140 Preventive Action Limits (PALs)			1,800	10

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)

VOCs = Volatile Organic Compounds

DUP = Duplicate Sample

-- = Not Applicable

Notes:

Table includes VOCs detected at one or more wells, one or more times.

NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2023.

NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2023.

Bold+underlined values meet or exceed NR 140 ESs.

Italic+underlined values meet or exceed NR 140 PALs.

Laboratory Notes/Qualifiers:

B = Compound was found in the blank and sample.

J = Reported value was between the limit of detection and the limit of quantitation.

Created by: AJR

Date: 7/18/2024

Last revision by: BJS

Date: 8/5/2024

Checked by: BJS

Date: 8/5/2024

Proj Mgr QA/QC: BLP

Date: 8/12/2024

Table 2c. Summary of Physical Properties - Sandstone - Glenwood Formation
Dane County Landfill Site No. 3 / SCS Engineers Project # 25222268.00
Feasibility Report Addendum No. 1

Boring or Well Number	Sample Depth (ft. bgs)	Grain-Size					Atterberg Limits		USCS Classification	Laboratory Permeability ASTM D5084 (cm/s)	Dry Density (pcf)	Moisture Content (%)
		% Gravel (>4.75 mm)	% Sand (4.75 mm-0.75 mm)	% Silt (0.75 mm-0.005 mm)	% Clay (<0.005 mm)	% Silt and Clay (P-200) (<0.75 mm)	Liquid Limit (%)	Plasticity Index (%)				
DP-7	12-16	13.0	54.9	19.9	12.2	32.1	NP	NP	SM	NT	NT	13.7
B10R	15-20	21.3	47.2	13.7	17.8	31.5	NP	NP	SM	NT	NT	4.9
B10	41-43	30.9	46.4	13.9	8.8	22.7	23	8	SC	NT	NT	12.9
DP-27	12-14	19.9	44.6	25.1	10.4	35.5	NP	NP	SM	NT	NT	6.6
DP-38	20-24	35.0	45.1	11.6	8.3	19.9	NP	NP	SM	NT	NT	7.4
N=		5	5	5	5	5	5	5	5	0	0	5
Min.		13.0	44.6	11.6	8.3	19.9	23.0	8.0	SM	--	--	4.9
Max.		35.0	54.9	25.1	17.8	35.5	23.0	8.0	SC	--	--	13.7
Mean		24.0	47.6	16.8	11.5	28.3	23.0	8.0	SM	--	--	9.1
Median		21.3	46.4	13.9	10.4	31.5	23.0	8.0	--	--	--	7.4
Std. Dev.		7.9	3.7	5.0	3.4	6.0	0.0	0.0	--	--	--	3.5

Abbreviations:

ASTM = American Society for Testing and Materials
USCS = Unified Soil Classification System

mm = millimeter
bgs = below ground surface

pcf = pounds per cubic foot
cm/s = centimeters per second

NT: Not tested
NV: No value
NP: Non-plastic

Note:

1. Refer to Attachment S of FR Addendum No. 1 for laboratory reports for DP-7, B10R, DP-27 and DP-38. Refer to Appendix F of the original FR for laboratory report for B10.

Created by:	<u>BJS</u>	Date:	<u>12/24/2024</u>
Last revision by:	<u>BJS</u>	Date:	<u>12/24/2024</u>
Checked by:	<u>DLN</u>	Date:	<u>1/10/2025</u>
Proj Mgr QA/QC:	<u>BLP</u>	Date:	<u>1/13/2025</u>

I:\25222268.00\Deliverables\Feasibility Report Addendum 1\Tables\Final\[2c Summary of Physical Properties-Glenwood Member.xls]Table 1