Appendix F

Boring and Monitoring Well Logs and Forms, and Geotechnical Test Reports

F1 Drilling Locations 1 through 11
F2 Drilling Locations 105 through 126
F3 Drilling Locations 212 through 233
F4 Wisconsin Well Information Form 4400-089

MW-111

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-111

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils & Engineering Services, Inc.	1/26/2023	1/27/2023	HSA, 4.25" ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD860	--	MW-111	876.9 Feet MSL	883.9 Feet MSL	8.3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 379,277 N, 2,169,693 E S/C/N
NE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location
Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S1	16	1 2 3 4	1	ORGANIC SILT (OL), very dark grayish brown (10YR 3/2), with roots. (Topsoil)	OL									
			2	LEAN CLAY (CL), olive brown (2.5Y 4/3) with rust/orange mottling, mostly silt with clay, soft, cohesive, uniform, massive, trace roots. (Loess)					2.0	M				
			3											
S2	16	2 3 3	4	% g-s-si-cl = 0-4-56-40	CL				1.5	M				
			5											
S3	18	0 2 7	6	From 6' to 7' bgs, mottled with gray, orange, and very dark brown.					0.5	M+				Depth to water at ~7'bgs.
			7	SILTY SAND (SM), yellowish brown (10YR 5/6), fine sand with medium to coarse sand with lenses of dense silt and clay and sub-round to sub-angular fine gravel. (Outwash) (Holy Hill Formation)										
S4	18	4 3 2	8							W				
			9											
			10											
			11	More fine grained sand and silt.	SM									
S5	18	5 5 17	12	Kh = 2.23E-03 cm/s						W				
			13											
S6	18	15 17 17	14	Alternating layers of fine to medium grained sand, more silt and fine round gravel.						W				
			15											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Jackie Rennebohm, PG	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-111 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16	SILTY SAND (SM), yellowish brown (10YR 5/6), fine sand with medium to coarse sand with lenses of dense silt and clay and sub-round to sub-angular fine gravel. (Outwash) (Holy Hill Formation)	SM									
S7	18	13 27 49	17	POORLY GRADED SAND WITH SILT (SP-SM), yellowish brown (10YR 5/6), fine sand to medium sand with sub-round gravel. (Outwash) (Holy Hill Formation)	SP-SM					W				
			18	At 16 to 17.5', POORLY GRADED SAND WITH SILT (SP-SM)										
S8	18	13 23 64/5"	19	% g-s-si-cl = 23-71-3-3 NP						W				No Munsell soil or rock color matches the sample from 19.6' to 20' bgs, the Munsel color chosen is the closest option.
			20	POORLY GRADED SAND (SP), white (10YR 8/1) and reddish yellow (7.5YR 7/8), fine to medium grained. (Weathered Sandstone Bedrock)	SP									
				End of boring at 20' bgs in sandstone. Constructed well from 18.8' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name Dane County Landfill Site No. 3 (Proposed)	**Local Grid Location of Well** ☐ ft. ☐ N. ☐ S. ☐ ft. ☐ E. ☐ W.	**Well Name** MW-111
Facility License, Permit or Monitoring No. --	**Local Grid Origin** ☐ (estimated: ☐) or **Well Location** ☐ Lat. ° ' " Long. ° ' " or	**Wis. Unique Well No.** WD860 / **DNR Well ID No.** --
Facility ID --	**St. Plane** 379277.34 ft. N, 2169693.49 ft. E. S/C/N	**Date Well Installed** 01 / 27 / 2023 (m m d d y y y y)
Type of Well Well Code MW / 11	**Section Location of Waste/Source** NE 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒ E ☐ W	**Well Installed By: Name (first, last) and Firm** Scott Klumb Soils & Engineering Services, Inc.
Distance from Waste/ Source ft. / **Enf. Stds. Apply** ☒	**Location of Well Relative to Waste/Source** u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	**Gov. Lot Number**

A. Protective pipe, top elevation 886.62 ft. MSL

B. Well casing, top elevation 886.59 ft. MSL

C. Land surface elevation 883.9 ft. MSL

D. Surface seal, bottom 879.9 ft. MSL or 4 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 883.9 ft. MSL or 0 ft.

F. Fine sand, top 879.9 ft. MSL or 4 ft.

G. Filter pack, top 877.4 ft. MSL or 6.5 ft.

H. Screen joint, top 875.4 ft. MSL or 8.5 ft.

I. Well bottom 865.1 ft. MSL or 18.8 ft.

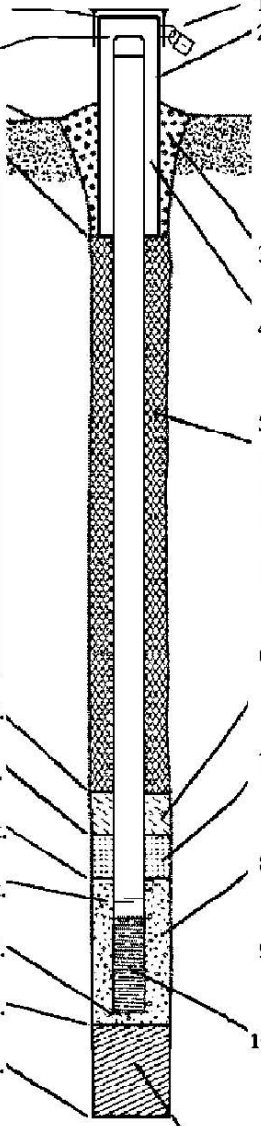
J. Filter pack, bottom 863.9 ft. MSL or 20 ft.

K. Borehole, bottom 863.9 ft. MSL or 20 ft.

L. Borehole, diameter 8.3 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☐ 30 Concrete ☐ 01 Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30
Filter Sand Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 2.07 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ☒
b. Volume added 0.25 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. R.W. Sidley #40 ☒
b. Volume added 3.0 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None ☒ 14 Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Stick-up Height= 2.7'

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-111
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well ID Number**
--	13	WD860	

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 140 min.

4. Depth of well (from top of well casisng) 208 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 117 gal.

7. Volume of water removed from well 123.00 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? ☐ Yes ☒ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 8.14 ft.	8.40 ft.
Date	b. 02/21/20223	02/21/2023
Time	c. 2:10 ☐ a.m. ☒ p.m.	4:30 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	1.0 inches	0.5 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) medium brown, no odor	Clear ☐ 20 Turbid ☒ 25 (Describe) medium brown, no odor

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	---.- mg/l	724.0 mg/l
15. COD	---.- mg/l	---.- mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Bri Last Name: Salome
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:

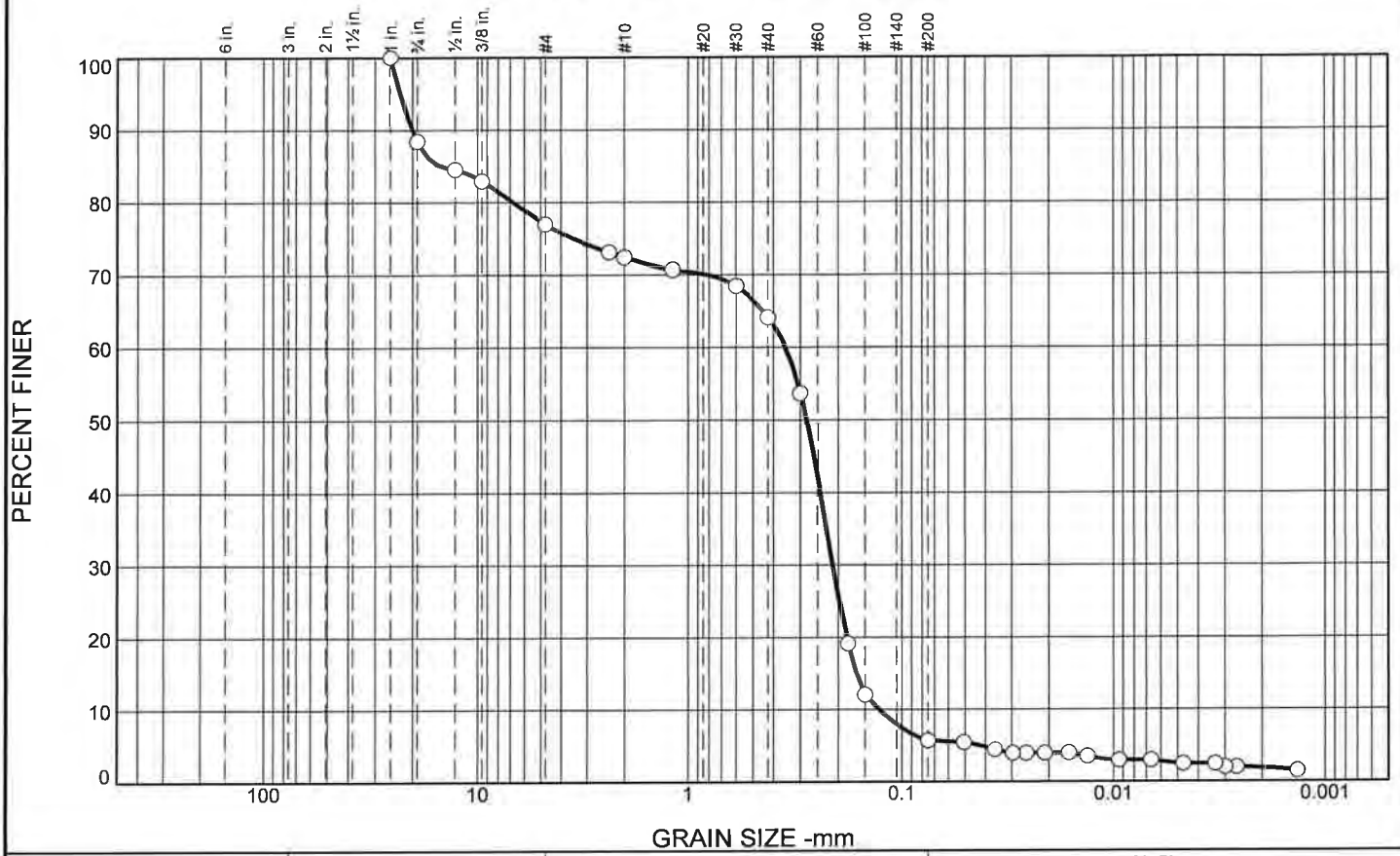
- Surged and purged for 30 minutes. ending DTW: 8.49ft; purged 11 gallons
- Pumped with monsoon at rate of 4:30min/bucket; 0.9min/gallon
- 10 well volumes = 112 gallons
- Total purge volume 123 gallons

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Bri Salome
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	11.6	11.5	4.5	8.4	58.3	3.2	2.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
3/4	88.4		
1/2	84.5		
3/8	82.9		
#4	76.9		
#8	73.1		
#10	72.4		
#16	70.7		
#30	68.4		
#40	64.0		
#50	53.6		
#80	19.2		
#100	12.1		
#200	5.7		

* (no specification provided)

Material Description

Brown Fine to Medium Sand, Some Gravel, Trace Silt and Clay

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{90}= 20.0738 D_{85}= 14.9035 D_{60}= 0.3523
D_{50}= 0.2816 D_{30}= 0.2132 D_{15}= 0.1640
D_{10}= 0.1284 C_u= 2.74 C_c= 1.00

Classification

USCS= SP-SM AASHTO= A-3

Remarks

NP=Non-Plastic

Sample Number: MW111 **Depth:** 16'-17.5'

Date: 3/27/23

CGC,Inc.

Client: SCS Engineers
Project: Dane County Yahara Hills

Project No: C22011-8 **Figure**

Tested By: JFS **Checked By:** KJS

ST-111

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		ST-111

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils & Engineering Services, Inc.	3/8/2023	3/8/2023	SSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
--	--	--	--	883.9 Feet MSL	4.3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 379,277 N, 2,169,693 E S / C / N
NE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ___ ° ___ ' ___ "
Long ___ ° ___ ' ___ "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind drilled to 3' bgs. (See MW-111 log for lithology from 0' to 20' bgs.)										
			2											
			3											
S1	16		4	LEAN CLAY, brown (10YR 4/4), black to gray mottling, mostly silt with clay, some fine sand, soft, cohesive, uniform, and massive. (Loess) At 3' to 5', LEAN CLAY (CL) % g-s-si-cl = 0-4-56-40 LL=44, PI=21	CL									Shelby tube sample from 3-5' bgs.
			5	End of boring at 5' bgs in loess. Abandoned boring with bentonite chips.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Adam Watson	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

State of Wis., Dept. of Natural Resources SCS No. 25222268.00
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☒ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane		ST-111

Latitude / Longitude (see instructions) ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NE	¼ SE	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☒ E ☐ W

Well Street Address: 7101 US Highway 12 & 18

Well City, Village or Town	Well ZIP Code
Madison, WI	53718

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	

2. Facility / Owner Information

Facility Name: Dane County Landfill No.3 (Proposed)
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner: Dane County Department of Waste and Renewables
Present Well Owner: Dane County Department of Waste and Renewables
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

City of Present Owner	State	ZIP Code
Madison	WI	53713

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 03/08/2023
If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify):

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
5	NA

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
4.3	NA

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
NA	~7.3

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☒ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☐ Bentonite Grout
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" Bentonite Chips	Surface	5	10 lbs	dry mix

6. Comments

Shelby Tube ST-111

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Soils & Engineering Services, Inc.		03/08/2023

Street or Route	Telephone Number
1102 Stewart St.	(608)274-7600

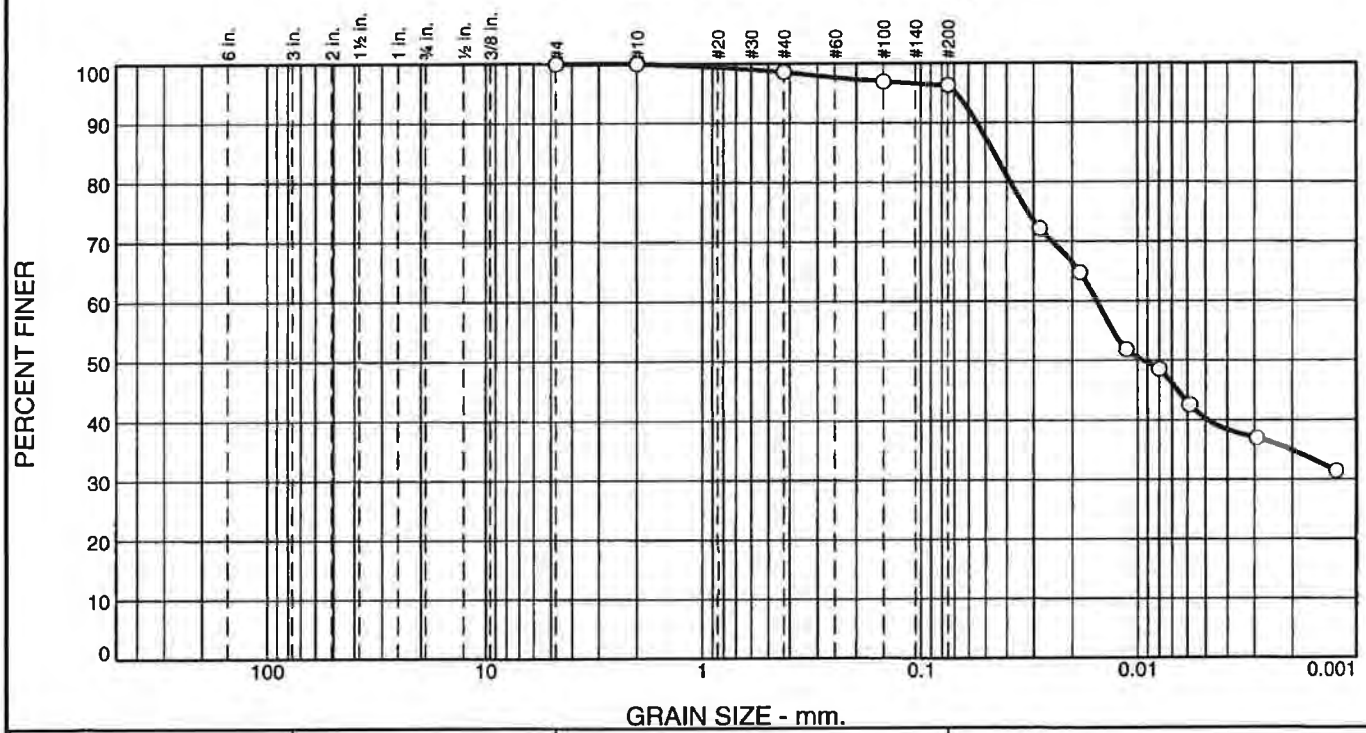
City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Madison	WI	53713		03/08/2023

DNR Use Only

Date Received	Noted By

Comments:

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.4	2.3	56.1	40.2

Test Results (ASTM D6913 & ASTM D1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#4	100.0		
#10	100.0		
#40	98.6		
#100	96.9		
#200	96.3		
0.0281 mm.	72.2		
0.0184 mm.	64.8		
0.0113 mm.	51.8		
0.0080 mm.	48.5		
0.0059 mm.	42.5		
0.0029 mm.	37.0		
0.0012 mm.	31.4		

* (no specification provided)

Material Description

LEAN CLAY, dark yellowish brown

Atterberg Limits (ASTM D 4318)

PL= 23 LL= 44 PI= 21

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-7-6(22)

Coefficients

D_{90}= 0.0549 D_{85}= 0.0458 D_{60}= 0.0155
D_{50}= 0.0094 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Munsell Color Code: 10YR 4/4

Date Received: 3/27/2023 **Date Tested:** 3/29/2023

Tested By: MRG

Checked By: RJP

Title: Eng. Project Manager

Source of Sample: ST-Soil Borings **Depth:** 3'-5' **Date Sampled:** 3/23/2023

Sample Number: ST-111

Tetra Tech
2679 Continental Drive
Green Bay, WI 54311

Client: CGC, Inc.

Project: Dane County - Yahara Hills

Project No: SCS #25222268.00 **Figure**

HYDRAULIC CONDUCTIVITY DETERMINATION
Rising tailwater method in a triaxial permeameter
ASTM D 5084, Method C (EM-1110-2-1906 7)

Tetra Tech
2679 Continental Dr.
Green Bay, WI. 54311

Project No. :	SCS # 25222268.00		
Client:	CGC, Inc.		
Project:	Dane Co. Yahara Hills		
Sampled Date:	3/23/2023	Date Received:	3/27/2023

SUMMARY OF TEST RESULTS

Sample No.:	ST-111	
Location:	S-1 @ 3.0'-5.0'	
Soil Classification:	LEAN CLAY, dark yellowish brown (CL)	
Munsell Color Code:	10YR 4/4	

	INITIAL	FINAL
DRY UNIT WEIGHT (pcf)	99.3	99.3
WATER CONTENT (%)	24.7	26.3
DIAMETER (cm)	7.18	7.18
LENGTH (cm)	8.11	8.11
HYDRAULIC GRADIENT (MAXIMUM)		11.3
PERCENT SATURATION	95.962412	102.28739
HYDRAULIC CONDUCTIVITY k (cm/sec)		5.79E-07

Tested By: Robert R. Rouse

Reviewed By: Robert J. Porter

Date Reviewed: 4/18/23

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		B-112

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils & Engineering	1/23/2023	1/23/2023	HSA, 4.25" ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
--	--	--	894.0 Feet MSL	899.0 Feet MSL	8.3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,724 N, 2,168,712 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 1 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S1	13	2 3 3 5	1	ORGANIC SILT (OL), very dark grayish brown (10YR 3/2), with roots. (Topsoil)	OL				1.75	M				
			2	SILT (ML), brown (7.5YR 4/3), with clay and some fine sand, soft, cohesive, massive, with trace roots. (Loess)	ML									
			3											
			4	LEAN CLAY (CL), gray (10YR 5/1) with orange mottling, mostly silt with clay, some find sand, soft, cohesive, uniform, massive. (Loess)	CL									
S2	12	2 1 1	5	SILTY SAND (SM), yellowish brown (10YR 5/6), mostly fine sand with medium to coarse sand, some clay, and fine to coarse gravel (mostly dolomite), uniform, massive. (Till) (Holy Hill Formation, Horicon Member)	SM					W				Depth to water at ~4' bgs.
			6											
S3	18	1 2 2	7							W				
			8											
S4		1/9" 1/9"	9							W				
			10	Same as above.										
			11											
S5	1	1/1" 60/0"	12							W				Sampled to 11', augered to refusal at 13' bgs.
			13	End of boring at 13' bgs in dolomite due to refusal. Abandoned borehole with bentonite chips.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Jackie Rennebohm, PG	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

The original boring was folded into the final log for MW-112

State of Wis., Dept. of Natural Resources SCS No. 25222268.00
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☒ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _	B-112

Latitude / Longitude (see instructions): _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ SE	¼ SE	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☒ E ☐ W

Well Street Address: 7101 US Highway 12 & 18

Well City, Village or Town	Well ZIP Code
Madison, WI	53718

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	_ _ _ _ _

2. Facility / Owner Information

Facility Name: Dane County Landfill No.3 (Proposed)
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner: Dane County Department of Waste and Renewables
Present Well Owner: Dane County Department of Waste and Renewables
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

City of Present Owner	State	ZIP Code
Madison	WI	53713

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 01/23/2023

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
13	NA

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
8.3	NA

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
NA	~4.8

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☒ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" Bentonite Chips	Surface	13	150 lbs	dry mix

6. Comments

Boring B-112

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Subsurface Exploration Service		01/23/2023

Street or Route	Telephone Number
2900 Lowell Dr.	(920)544-4226

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Green Bay	WI	54311		01/23/2023

DNR Use Only

Date Received	Noted By

Comments:

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		B-112B

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
John Wagner Subsurface Exploration Services	2/8/2023	2/10/2023	Core, NQ 2" ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
--	--	--	--	899.0 Feet MSL	8.0"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,724 N, 2,168,712 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ___° ___' ___"
Long ___° ___' ___"
Local Grid Location
Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind drilled to 18' bgs. (See MW-112 log for lithology from 0'-16'.)										
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											
			13											
			14											
			15											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Adam Watson	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-112B Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	Blind drilled to 18' bgs. (See MW-112 log for lithology from 0'-13'.)										
			17											
			18											
S1	2	50/2	19	SILTY SAND (SM), yellow brown (10YR 6/6) to light brownish gray (2.5Y 6/2), fine to coarse sand, with silt and angular gravel, mostly dolomite. (Weathered Dolomite Bedrock)	SM									Casing installed from 0.5 to 15.5 feet below ground surface could not be pulled from the ground and was abandoned in place.
				End of boring at 19' bgs in weathered dolomite bedrock. Abandoned borehole with bentonite grout and bentonite chips with 15 feet of casing in place.										

State of Wis., Dept. of Natural Resources SCS No. 25222268.00
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☒ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane		B-112B

Latitude / Longitude (see instructions) ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ SE	¼ SE	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☒ E ☐ W

Well Street Address: 7101 US Highway 12 & 18

Well City, Village or Town	Well ZIP Code
Madison, WI	53718

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	

2. Facility / Owner Information

Facility Name: Dane County Landfill No.3 (Proposed)
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner: Dane County Department of Waste and Renewables
Present Well Owner: Dane County Department of Waste and Renewables
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

City of Present Owner	State	ZIP Code
Madison	WI	53713

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 02/08/2023

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify):

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
19	NA

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
8.0	NA

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
NA	~4.8

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☒ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☐ No	☒ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☒ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☒ Bentonite Grout
☐ Sand-Cement (Concrete) Grout ☐ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Grout	Surface	19	30-gallons	2lbs/gal

6. Comments

Casing could not be retrieved from borehole between 0.6" and 15.5' bgs and was abandoned in place

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Subsurface Exploration Service		02/10/2023

Street or Route	Telephone Number
2900 Lowell Dr.	(920)544-4226

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Green Bay	WI	54311		02/10/2023

DNR Use Only

Date Received	Noted By

Comments:

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		B-112C

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dylan Martin Subsurface Exploration Services	2/14/2023	2/14/2023	HSA 4.25" ID & NQ Core

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
--	--	--	--	899.0 Feet MSL	8.3" & 3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,724 N, 2,162,712 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Blind drilled to 15' bgs. (See MW-112 log for lithology from 0-16' bgs.)										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Adam Watson	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-112C Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	DOLOMITE (DL1), gray (2.5Y 5/1) with dark gray (2.5Y 4/1) and pale brown (2.5Y 7/4), mottled, thinly interbedded with shale, round to oval vugs, trace chert, fossiliferous. (Sinnipee Group, Galena Formation)										
			17		DL1									
Run 1	63		18											FF=1.90/ft Percent Recovery=100% RQD=79%, good
			19											
			20	DOLOMITE (DL2), dark brown (10YR 2/2) and light gray (2.5Y 6/1), massive to thinly bedded with shale and or silt, with round, oval, and elongated vugs, trace chert, fossiliferous. (Sinnipee Group, Platteville Formation)										
			21											
			22											
Run 2	60		23											FF=1.20/ft Percent Recovery=100% RQD=92.5%, excellent
			24											
			25											
			26	Same as above but more yellow/beige and less thinly bedded with shale/silt layers.										
			27	Same as above but sandy.	DL2									
Run 3	60		28											FF=1.4/ft Percent Recovery=100% RQD=59%, fair
			29											
			30											
			31											
			32	Brown clay (10YR 2/2) at 31.75 feet. Same as above but color change to gray (2.5Y 5/1).										
Run 4	60		33											FF=1.4/ft Percent Recovery=100% RQD=76%, good
			34											
			35	SANDSTONE (SS1), very dark gray (2.5Y 3/1) to light gray (2.5Y 7/1) and gray (2.5Y 6/1), fine to medium grained, poorly sorted, cemented with dolomite, with thin wavy dark gray shalt and or silt laminations, with sulfides (pyrite). (Ancell Group, Glenwood Formation)										
			36											
			37		SS1									
Run 5	55		38											FF=2.78/ft Percent Recovery=93% RQD=53.3%, fair
			39											
			40											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-112C Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
Run 6	38		41 42 43	SANDSTONE (SS1), very dark gray (2.5Y 3/1) to light gray (2.5Y 7/1) and gray (2.5Y 6/1), fine to medium grained, poorly sorted, cemented with dolomite, with thin wavy dark gray shalt and or silt laminations, with sulfides (pyrite). (Ancell Group, Glenwood Formation)	SS1									FF=1.26/ft Percent Recovery=100% RQD=99%, ecellent
				End of boring at 43' bgs in sandstone. Abandoned borehole with bentonite grout and bentonite chips.										

State of Wis., Dept. of Natural Resources SCS No. 25222268.00
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☒ Waste Management ☐ Other:

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane		B-112C

Latitude / Longitude (see instructions) ____ N ____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ SE	¼ SE	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☒ E ☐ W

Well Street Address: 7101 US Highway 12 & 18

Well City, Village or Town	Well ZIP Code
Madison, WI	53718

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	

2. Facility / Owner Information

Facility Name: Dane County Landfill No.3 (Proposed)
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner: Dane County Department of Waste and Renewables
Present Well Owner: Dane County Department of Waste and Renewables
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

City of Present Owner	State	ZIP Code
Madison	WI	53713

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 02/14/2023
If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify):

Formation Type:
☒ Unconsolidated Formation ☒ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
43	NA

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
8.3 to 3.0	NA

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
NA	~4.8

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☒ Yes	☐ No	☐ N/A
If yes, was hole retopped?	☒ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☒ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain):

Sealing Materials
☐ Neat Cement Grout ☒ Bentonite Grout
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

Material	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" Bentonite Chips	Surface	1	25 lbs	dry mix
Bentonite Grout	1	43	30-gallons	2lbs/gal

6. Comments

Boring B-112C

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Subsurface Exploration Services		02/15/2023

Street or Route	Telephone Number
2900 Lowell Dr.	(920)544-4226

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Green Bay	WI	54311		02/15/2023

DNR Use Only

Date Received	Noted By

Comments:

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-112

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils & Engineering Services, Inc.	1/23/2023	1/23/2023	HSA, 4.25" ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD848	--	MW-112	896.0 Feet MSL	899.0 Feet MSL	8.3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,724 N, 2,168,712 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S1	13	2 3 3 5	1	ORGANIC SILT (OL), very dark grayish brown (10YR 3/2), with roots. (Topsoil)	OL				1.75	M				
			2	SILT (ML), brown (7.5YR 4/3), with clay and some fine sand, soft, cohesive, massive, with trace roots. (Loess)	ML									
			3											
S2	12	2 1 1	4	LEAN CLAY (CL), gray (10YR 5/1) with orange mottling, mostly silt with clay, some find sand, soft, cohesive, uniform, massive. (Loess)	CL					W				Depth to water at ~4' bgs.
			5	SILTY SAND (SM), yellowish brown (10YR 5/6), mostly fine sand with medium to coarse sand, some clay, and fine to coarse gravel (mostly dolomite), uniform, massive. (Till) (Holy Hill Formation, Horicon Member)	SM									
S3	18	1 2 2	6							W				
			7											
			8											
S4		1/9" 1/9"	9							W				
			10											
			11	SILTY SAND (SM), pale brown (2.5Y 7/3), fine to coarse gravel (mostly dolomite) with fine to coarse sand, some chert. (Weathered Dolomite Bedrock) (Sinnipee Group, Galena Formation)	SM									
S5	1	1/1" 60/0"	12							W				
			13	At 13.5' to 15', SILTY SAND (SM) % g-s-si-cl = 14-49-37 NP										
			14											
S6	3	100/2"	15	Kh = 7.48E-03 cm/s						W				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Adam Watson	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-112 Use only as an attachment to Form 4400-122.

Sample									Soil Properties						
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	SILTY SAND (SM), pale brown (2.5Y 7/3), fine to coarse gravel (mostly dolomite) with fine to coarse sand, some chert. (Weathered Dolomite Bedrock) (Sinnipee Group, Galena Formation)	SM									
				End of boring at 16' bgs in dolomite. Constructed well from 15.3' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Dane County Landfill Site No. 3 (Proposed)	Local Grid Location of Well: ___ ft. ☐N. ☐S. ___ ft. ☐E. ☐W.	Well Name: MW-112
Facility License, Permit or Monitoring No.: --	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ___ ° ___ ' ___ " Long. ___ ° ___ ' ___ " or	Wis. Unique Well No.: WD848 / DNR Well ID No.: --
Facility ID: --	St. Plane 378723.67 ft. N, 2168712.45 ft. E. S/C/N	Date Well Installed: 01 / 23 / 2023 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Scott Klumb / Soils & Engineering Services, Inc.
Distance from Waste/Source ___ ft. / Enf. Stds. Apply ☒	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation 901.49 ft. MSL
B. Well casing, top elevation 901.49 ft. MSL
C. Land surface elevation 899.0 ft. MSL
D. Surface seal, bottom 894.5 ft. MSL or 4.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☒

13. Sieve analysis performed? ☒ Yes ☐ No

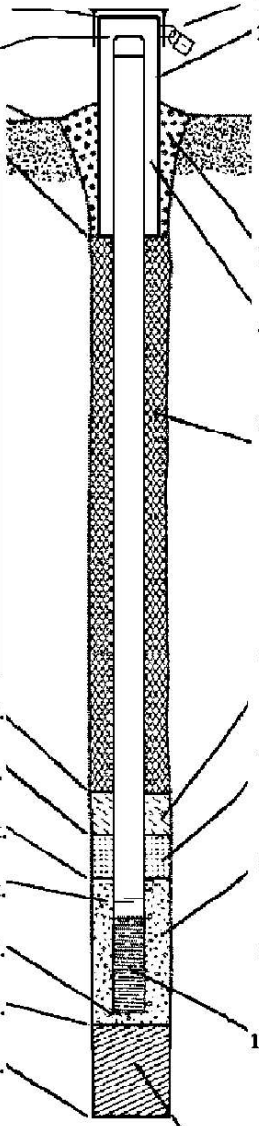
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 899.0 ft. MSL or 0 ft.
F. Fine sand, top 894.5 ft. MSL or 4.5 ft.
G. Filter pack, top 894.1 ft. MSL or 4.9 ft.
H. Screen joint, top 894.0 ft. MSL or 5 ft.
I. Well bottom 883.7 ft. MSL or 15.3 ft.
J. Filter pack, bottom 883.0 ft. MSL or 16 ft.
K. Borehole, bottom 883.0 ft. MSL or 16 ft.
L. Borehole, diameter 8.3 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☒ 30 / Concrete ☐ 01 / Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 / Filter Sand / Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ___ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ___ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ___ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 2.07 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. ___ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size ☒
a. Red Flint #15
b. Volume added 0.25 ft^3
8. Filter pack material: Manufacturer, product name & mesh size ☒
a. Red Flint #40
b. Volume added 1.5 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Pro top (top)=34.5' above ground. TOC=2.59' above ground above ground surface

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-112

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
--	13	WD848	--

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 120 min.

4. Depth of well (from top of well casisng) 17.7 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 8.5 gal.

7. Volume of water removed from well 85.9 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 8.14 ft.	8.14 ft.
Date	b. 01/26/2023 (m m d d y y y y)	01/26/2023
Time	c. 12:00 ☐ a.m. ☒ p.m.	2:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	00.0 inches	00.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) light brown color; no odor	Clear ☐ 20 Turbid ☒ 25 (Describe) slight turbidity, almost clear; slight greenish brown color
14. Total suspended solids	---.- mg/l	8,520.0 mg/l
15. COD	---.- mg/l	---.- mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Ethan Last Name: Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:

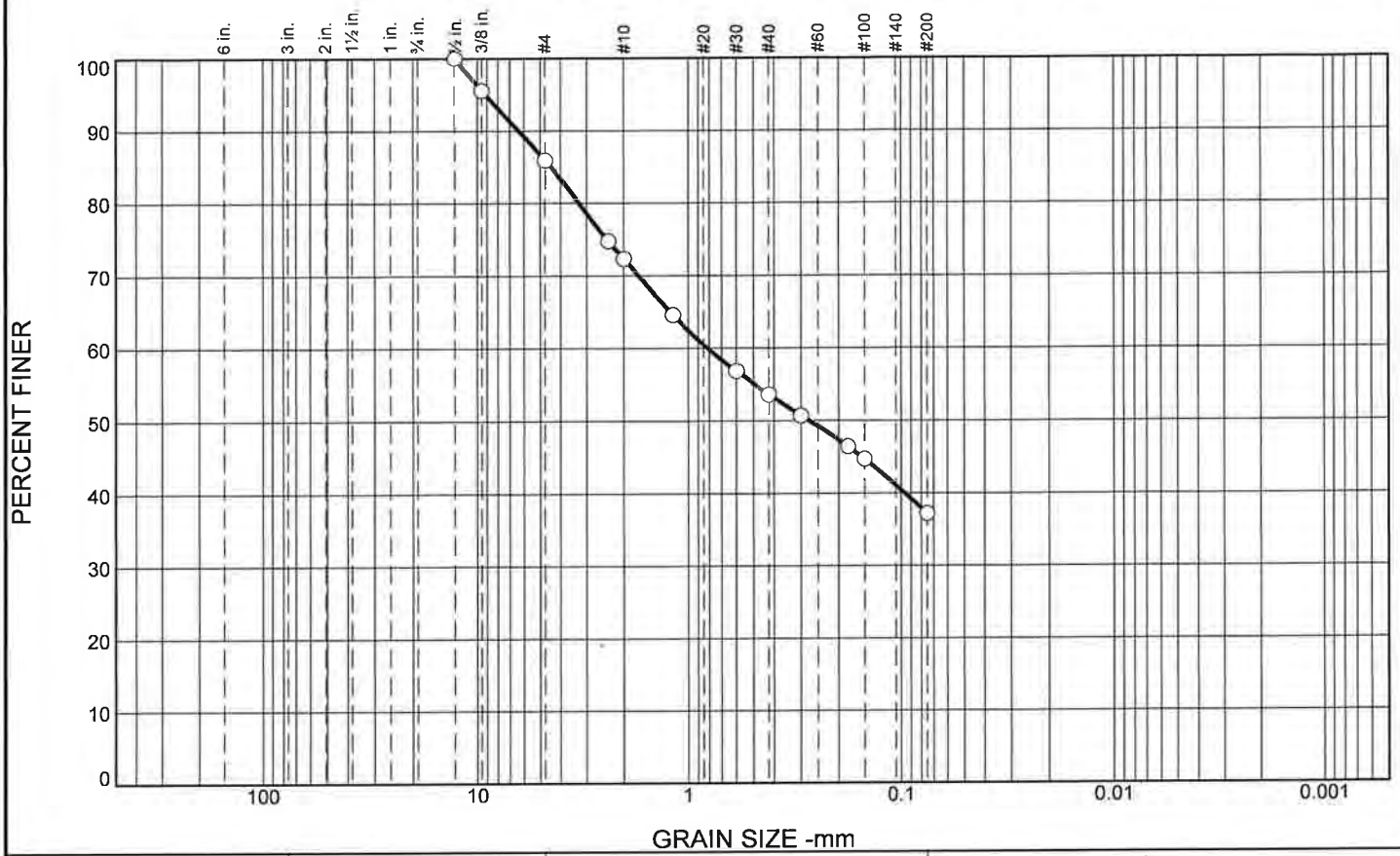
- Purged and surged for 30 minutes, purged 9 gallons
- 10 well volumes: 85 gallons
- 1.25 gal/min pump rate
- Pumped full 10 well volume using monsoon pump

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Ethan Schaefer
Print Name: Ethan Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	14.1	13.6	18.6	16.5	37.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2	100.0		
3/8	95.6		
#4	85.9		
#8	74.8		
#10	72.3		
#16	64.5		
#30	56.8		
#40	53.7		
#50	50.7		
#80	46.4		
#100	44.7		
#200	37.2		

* (no specification provided)

Material Description

Brown Silty Fine to Coarse Sand, Some Gravel

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{90}= 6.3416 D_{85}= 4.4690 D_{60}= 0.8156
D_{50}= 0.2755 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

NP=Non-Plastic

Sample Number: MW112 **Depth:** 13.5'-15'

Date: 3/27/23

CGC, Inc.

Client: SCS Engineers
Project: Dane County Yahara Hills

Project No: C22011-8 **Figure**

Tested By: JFS **Checked By:** KJS

MW-113

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-113

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils & Engineering Services, Inc.	1/19/2023	3/3/2023	HSA, 4.25" ID & Air Rotary

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD865	--	MW-113	--	916.4 Feet MSL	8.3" & 6"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,410 N, 2,167,782 E S/C/N
SW 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ___° ___' ___"
Long ___° ___' ___"
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S1	18	0 0 3 2	1	ORGANIC SILT (OL), very dark grayish brown (10YR 3/2), with roots. (Topsoil)	OL				1.5	M				
			2	LEAN CLAY (CL), dark yellowish brown (10YR 4/4), mostly silt with clay, medium stiff, cohesive, uniform, massive, trace roots. (Loess)	CL									
			3											
S2	13	3 5 5	4	SILTY SAND (SM), red (2.5YR 4/6), moslty fine sand with medium to coarse sand, some clay, and fine to coarse gravel (mostly dolomite), uniform, massive. (Till) (Holy Hill Formation, Horicon Member)	SM					M				
			5											
S3	14	6	6							M				
			7											
			8											
S4	10	5 5 6	9							M				
			10											
			11											
S5	15	6 7 7	12	Olive (5Y 4/4) gravel (mostly dolomite).						M				
			13											
			14											
S6	15	4 18 8	15							M				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Jackie Rennebohm, PG	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-113 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
S7	17	6 7 7	16–17	SILTY SAND (SM), red (2.5YR 4/6), moslty fine sand with medium to coarse sand, some clay, and fine to coarse gravel (mostly dolomite), uniform, massive. (Till) (Holy Hill Formation, Horicon Member)	SM					M				
S8	18	6 23 25	17–21							M				Driller noted harder rock starting at 21.4' bgs.
S9	<1"	60/<1"	21–22	SILTY GRAVEL (GM), dark gray (5Y 4/1) and very dark gray (5Y 3/1), fine to coarse gravel (mostly dolomite) with fine to coarse sand, with some chert. (Weathered Dolomite Bedrock)	GM					M				
			24–25	Refusal at 24' bgs with HSA. Drilled 6" diameter hole to 37' bgs on 3/2/223 using air rotary. Blind drilled 24-37' bgs. (See MW-113A log for lithology 24' to 37' bgs.)										
			25–30											
			30–31	Kh = 4.52E-04 cm/s	DL1									
			31–37											
			37	End of boring at 37' bgs in dolomite. Constructed well from 36.3' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Dane County Landfill Site No. 3 (Proposed)	Local Grid Location of Well ☐ N. ☐ S. ____ ft. ☐ E. ☐ W. ____ ft.	Well Name: MW-113
Facility License, Permit or Monitoring No.: --	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WD865 / DNR Well ID No.: --
Facility ID: --	St. Plane 378409.94 ft. N, 2167782.39 ft. E. S/C/N	Date Well Installed: 03 / 03 / 2023 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SW 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒ E ☐ W	Well Installed By: Name (first, last) and Firm: Scott Klumb / Soils & Engineering Services, Inc.
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☒	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation 919.34 ft. MSL
B. Well casing, top elevation 919.37 ft. MSL
C. Land surface elevation 916.4 ft. MSL
D. Surface seal, bottom 894.9 ft. MSL or 21.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☒

13. Sieve analysis performed? ☐ Yes ☒ No

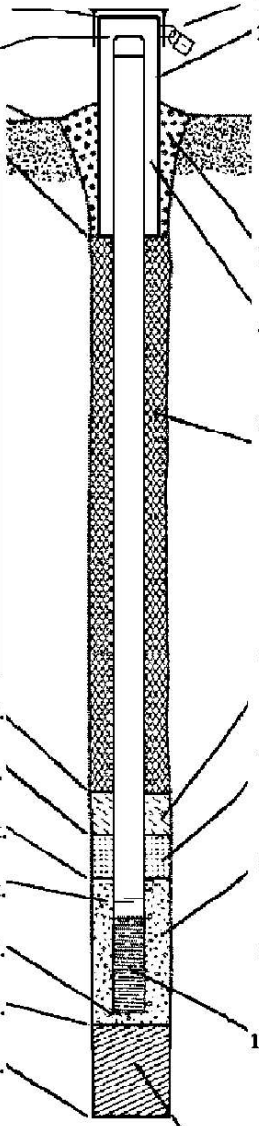
14. Drilling method used: Rotary ☒ 50 / Hollow Stem Auger ☒ 41 / Other ☐

15. Drilling fluid used: Water ☐ 02 / Air ☒ 01 / Drilling Mud ☐ 03 / None ☐ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 916.4 ft. MSL or 0 ft.
F. Fine sand, top 894.9 ft. MSL or 21.5 ft.
G. Filter pack, top 892.4 ft. MSL or 24 ft.
H. Screen joint, top 890.4 ft. MSL or 26 ft.
I. Well bottom 880.1 ft. MSL or 36.3 ft.
J. Filter pack, bottom 879.4 ft. MSL or 37 ft.
K. Borehole, bottom 879.4 ft. MSL or 37 ft.
L. Borehole, diameter 6.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe:
3. Surface seal: Bentonite ☒ 30 / Concrete ☐ 01 / Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 / Other ☒
Filter Sand
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 8.28 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☒ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. Pell plug, Bentonite pellets Other ☒
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ☒
b. Volume added 0.5 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40 ☒
b. Volume added 20 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelop ment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-113

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	13	WD865	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐ __

3. Time spent developing well 75 min.

4. Depth of well (from top of well casisng) 39.33 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 8.4 gal.

7. Volume of water removed from well 12.5 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 22.70 ft.	35.41 ft.
Date	b. 03/16/2023 (m m d d y y y y)	03/16/2023
Time	c. 10:25 ☒ a.m. ☐ p.m.	11:40 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	~2.0 inches	~1.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Cloudy brown	Clear ☒ 20 Turbid ☐ 25 (Describe) light cloudy brown, slightly less turbid

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	---.- mg/l	5,510.0 mg/l
15. COD	---.- mg/l	---.- mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Bridget Last Name: Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:
- 10 well volumes = 84 gallons
- Bailed 5 gal in surge and purge, pumped 5 more gallons and well went dry
- Waited 10 min, bailed dry, waited 10 min and bailed dry again. Only was able to get 2.5 gallons

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rat sa ck
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Bridget Russell
Print Name: Bridget Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

MW-113A

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-113A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
John Wagner, Subsurface Exploration Services Scott Klumb, Soils & Engineering Services, Inc.	2/6/2023	3/2/2023	HSA, 4.25" ID & Air Rotary

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD866	--	MW-113A	--	916.6 Feet MSL	8.3" & 6"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,412 N, 2,167,779 E S/C/N
SW 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Blind drilled to 25' bgs. (See MW-113 log for lithology from 0' to 25' bgs). Subsurface Exploration Services cored hole from 25' to 68' bgs on 2/6-7/2023. Soils & Engineering Services, Inc. reamed hole to 6" diameter using air rotary on 3/2/2023 and set well MW-113A at 66.8' bgs.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Adam Watson	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-113A Use only as an attachment to Form 4400-122.

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16											
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25	DOLOMITE (DL1), dark gray (5Y 4/1), very dark gray (5Y 3/1), and light yellowish brown (2.5Y 6/4), thinly interbedded with shale, bedding is mottled and/or wavy, with oval to round vugs, trace chert, fossiliferous. (Sinnipee Group, Galena Formation)											
			26											
			27											
Run 1	62		28											FF=1.92/ft Percent Recovery=100% RQD=73%, fair.
			29											
			30											
			31											
			32		DL1									
Run 2	60		33											FF=1.55/ft Percent Recovery=100% RQD=78%, fair
			34											
			35											
			36											
			37											
Run 3	55.5		38											FF=0.43/ft Percent Recovery=92.5% RQD=86%, good
			39											
			40											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-113A Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			41	DOLOMITE (DL1), dark gray (5Y 4/1), very dark gray (5Y 3/1), and light yellowish brown (2.5Y 6/4), mottled and/or wavy bedding, thinly interbedded with shale, with oval to round vugs, trace chert, fossiliferous. (Sinnipee Group, Galena Formation)	DL1									
			42											
Run 4	60		43											FF=0.77/ft Percent Recovery=100% RQD=95%, excellent
			44	DOLOMITE (SH), dark gray (5Y 4/1) and very dark gray (5Y 3/1), thinly interbedded with shale, bedding is wavy, trace chert. (Sinnipee Group, Decorah Formation)										
			45											
			46											
			47											
Run 5	60		48											FF=0.96/ft Percent Recovery=100% RQD=89%, good
			49											
			50	Light gray (2.5Y 7/1 to 7/2), with 3" layer of light greenish gray (Gley 1 7/5G 7/1) clay, trace vugs, pyrite, and white layering.	SH									
			51											
			52											
Run 6	60		53											FF=1.8/ft Percent Recovery=100% RQD=80%, good
			54											
			55											
			56	DOLOMITE (DL2), gray (5Y 5/1), massive to thinly bedded with shale and/or silt, with chert, trace round to oval vugs, and green clay within fractures and bedding. (Sinnipee Group, Platteville Formation)										
			57											
Run 7	59		58											FF=1.83/ft Percent Recovery=98% RQD=79%, good
			59											
			60	Gray (2.5Y 6/1) and light gray (5Y 7/1).	DL2									
			61											
			62											
Run 8	59		63	Kh = 3.87E-05 cm/s										FF=2.03/ft Percent Recovery=98% RQD=73%, fair
			64											
			65											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-113A Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
Run 9	40		66 67 68	SANDSTONE (SS1), yellow (2.5Y 7/6), fine to coarse grained, poorly sorted, cemented with dolomite, trace green/gray clay. (Ancell Group, Glenwood Formation)	SS1									FF=2.40/ft Percent Recovery=100% RQD=80.5%, good
				End of boring at 68' bgs in sandstone. Hole reamed to 6" diameter using air rotary and constructed well from 66.8' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name Dane County Landfill Site No. 3 (Proposed)	**Local Grid Location of Well** ☐ N. ☐ S. ____ ft. ☐ E. ☐ W. ____ ft.	**Well Name** MW-113A
Facility License, Permit or Monitoring No. --	**Local Grid Origin** ☐ (estimated: ☐) or **Well Location** ☐ Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or	**Wis. Unique Well No.** WD866 — **DNR Well ID No.** --
Facility ID --	**St. Plane** 378412.05 ft. N, 2167779.20 ft. E. S/C/N	**Date Well Installed** 03 / 02 / 2023 (m m d d y y y y)
Type of Well Well Code 12 / PZ	**Section Location of Waste/Source** SW 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒ E ☐ W	**Well Installed By: Name (first, last) and Firm** Scott Klumb Soils & Engineering Services, Inc.
Distance from Waste/ Source ____ ft. — **Enf. Stds. Apply** ☒	**Location of Well Relative to Waste/Source** u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	**Gov. Lot Number**

A. Protective pipe, top elevation 919.29 ft. MSL

B. Well casing, top elevation 919.31 ft. MSL

C. Land surface elevation 916.6 ft. MSL

D. Surface seal, bottom 864.6 ft. MSL or 52 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☒

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☒ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☒ 02 Air ☒ 01
Drilling Mud ☐ 03 None ☐ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe N/A

17. Source of water (attach analysis, if required):
Yahara Hills Private Well

E. Bentonite seal, top 864.6 ft. MSL or 52 ft.

F. Fine sand, top 859.6 ft. MSL or 57 ft.

G. Filter pack, top 857.6 ft. MSL or 59 ft.

H. Screen joint, top 855.1 ft. MSL or 61.5 ft.

I. Well bottom 849.8 ft. MSL or 66.8 ft.

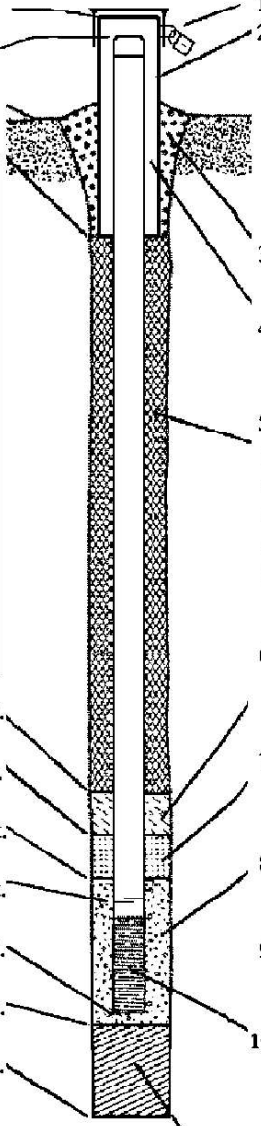
J. Filter pack, bottom 848.6 ft. MSL or 68 ft.

K. Borehole, bottom 848.6 ft. MSL or 68 ft.

L. Borehole, diameter 6.0 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:

3. Surface seal: Bentonite ☒ 30 Concrete ☐ 01 Other ☐

4. Material between well casing and protective pipe:
Filter Sand — Bentonite ☐ 30 Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. 2:1 Lbs/gal mud weight . . . Bentonite-sand slurry ☒ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 15.4 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☒ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☒ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. Pell plug, Bentonite pellets Other ☒

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ☒
b. Volume added 0.5 ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40 ☒
b. Volume added 1.75 ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐

10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 5 ft.

11. Backfill material (below filter pack): None ☒ 14 Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-113A

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	13	WD866	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 180 min.

4. Depth of well (from top of well casisng) 70.2 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 11.7 gal.

7. Volume of water removed from well 87.24 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 23.65 ft.	58.70 ft.
Date	b. 03/16/2023 (m m d d y y y y)	03/16/2023
Time	c. 9:45 ☒ a.m. ☐ p.m.	12:45 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	~2.0 inches	~2.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Light brown cloudy	Clear ☒ 20 Turbid ☐ 25 (Describe) clear
14. Total suspended solids	---.- mg/l	255.0 mg/l
15. COD	---.- mg/l	---.- mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Bridget Last Name: Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:
- 10 well volumes = 117 gallons
- Bailed 2 gal in surge and purge 10 min, pumped 3 more gallons and battery on monsoon died
- Surged and purged monsoon new battery starting at 10:50am, went dry twice let recharge for 10/15 min each time.

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Bridget Russell
Print Name: Bridget Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

MW-114

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-114

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils & Engineering Services, Inc.	1/23/2023	1/23/2023	HSA, 4.25" ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD847	--	MW-114	891.3 Feet MSL	897.3 Feet MSL	8.3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,420 N, 2,168,480 E S/C/N
SW 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S1	20	0 3 2 3	1	SILT (ML), very dark grayish brown (10YR 3/2), organic rich, with roots. (Topsoil)	ML					M				
			2	LEAN CLAY (CL), very dark grayish brown (10YR 3/2), mostly silt with clay, soft, cohesive, uniform, massive, trace roots. (Loess)										
			3											
S2	15	3 4 4	4	At 3.5' to 5', LEAN CLAY (CL) % g-s-si-cl = 0-21-49-31 LL=42, PI=23	CL				1.5	M				Depth to water at ~6' bgs.
			5	Gray (10YR 5/1) with orange and black mottling.										
			6											
S3	14	0 1 2	7	SILTY SAND (SM), yellowish brown (10YR 5/6), mostly fine sand with medium and coarse sand and some clay, fine and coarse gravel (mostly dolomite), uniform, massive. (Till) (Holy Hill Formation, Horicon Member)						W				
			8											
S4	18	1 1 1	9		SM					W				
			10	Kh = 2.30E-03 cm/s										
			11											
S5	18	1 10 12	12							W				
			13	SANDSTONE (SS2), yellow (10YR 8/6) and white (10YR 8/1), mostly fine grained with medium sand and fine gravel. (Ancell Group, St. Peter Formation, Tonti Member)										
			14	At 13.5' to 15', SILTY SAND (SM) % g-s-si-cl = 8-79-5-8	SS2									
S6	18	13 26 36	15							W				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Adam Watson	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-114 Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				Dark red (2.5YR 3/6) inclusions (iron).	SS2									
			16	End of boring at 16' bgs in sandstone. Constructed well from 15.3' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name Dane County Landfill Site No. 3 (Proposed)	**Local Grid Location of Well** ☐ ft. ☐ N. ☐ S. ☐ ft. ☐ E. ☐ W.	**Well Name** MW-114
Facility License, Permit or Monitoring No. --	**Local Grid Origin** ☐ (estimated: ☐) or **Well Location** ☐ Lat. ° ' " Long. ° ' " or	**Wis. Unique Well No.** WD847
Facility ID --	**St. Plane** 378420.49 ft. N, 2168480.17 ft. E. S/C/N	**DNR Well ID No.** --
Type of Well Well Code 11 / MW	**Section Location of Waste/Source** SW 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒ E ☐ W	**Date Well Installed** 01 / 23 / 2023 (m m d d y y y y)
Distance from Waste/ Source ft. / **Enf. Stds. Apply** ☒	**Location of Well Relative to Waste/Source** u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	**Gov. Lot Number**
		Well Installed By: Name (first, last) and Firm Scott Klumb Soils & Engineering Services, Inc.

A. Protective pipe, top elevation 899.87 ft. MSL

B. Well casing, top elevation 899.89 ft. MSL

C. Land surface elevation 897.3 ft. MSL

D. Surface seal, bottom 892.8 ft. MSL or 4.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☒ SC ☐ ML ☐ MH ☐ CL ☒ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 897.3 ft. MSL or 0 ft.

F. Fine sand, top 892.8 ft. MSL or 4.5 ft.

G. Filter pack, top 892.55 ft. MSL or 4.75 ft.

H. Screen joint, top 892.3 ft. MSL or 5 ft.

I. Well bottom 882.0 ft. MSL or 15.3 ft.

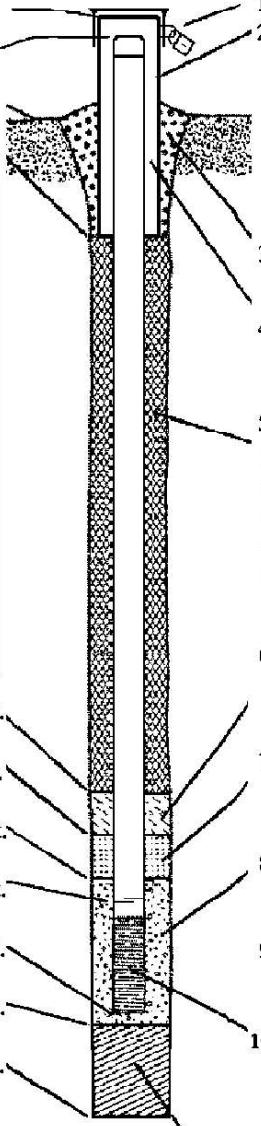
J. Filter pack, bottom 881.3 ft. MSL or 16 ft.

K. Borehole, bottom 881.3 ft. MSL or 16 ft.

L. Borehole, diameter 8.3 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:

3. Surface seal: Bentonite ☒ 30 Concrete ☐ 01 Other ☐

4. Material between well casing and protective pipe:
Filter Sand
Bentonite ☐ 30 Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 2.07 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ☒
b. Volume added 0.25 ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40 ☒
b. Volume added 1.5 ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐

10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter pack): None ☒ 14 Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

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Pro top (top)=34.5' above ground. TOC=2.59' above ground above ground surface

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-114

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
--	13	WD897	--

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 125 min.

4. Depth of well (from top of well casisng) 18.1 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 12.0 gal.

7. Volume of water removed from well 95.0 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 5.08 ft.	5.43 ft.
Date	b. 01/27/2023 (mm/dd/yyyy)	01/27/2023
Time	c. 9:40 ☒ a.m. ☐ p.m.	11:45 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	2.0 inches	00.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
(Describe)	light brown color, no odor	clear, no odor
14. Total suspended solids	---.- mg/l	59.6 mg/l
15. COD	---.- mg/l	---.- mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Ethan Last Name: Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:

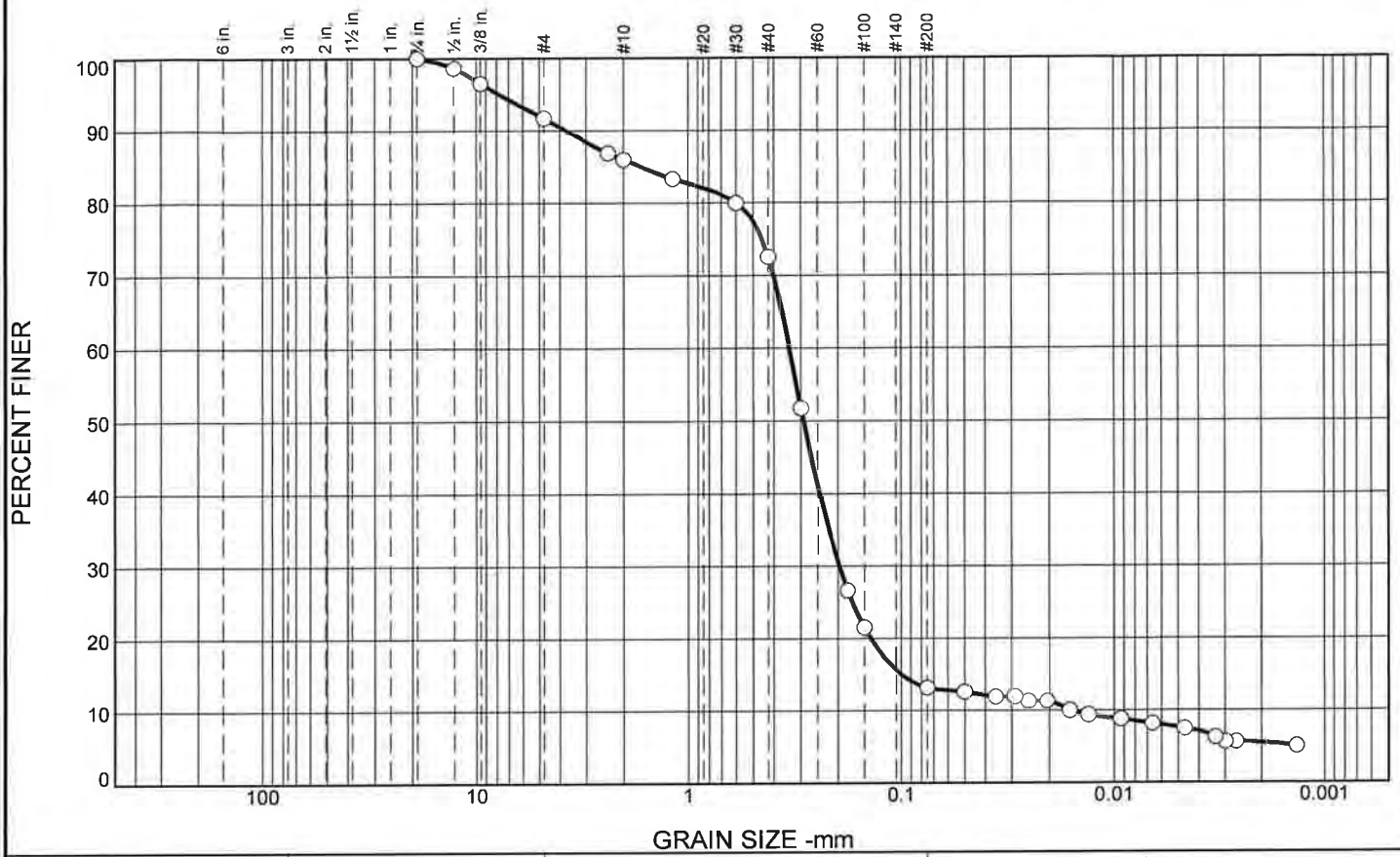
- Purged and surged for 30 minutes with bailer, purged 15 gallons
- 10 well volumes: 120 gallons
- Water purged clear after 80 gallons purged
- Purged using both monsoon pump and bailer (due to freezing of monsoon pump)

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Ethan Schaefer
Print Name: Ethan Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	8.3	5.7	13.5	59.3	5.5	7.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	98.6		
3/8	96.5		
#4	91.7		
#8	86.9		
#10	86.0		
#16	83.2		
#30	80.0		
#40	72.5		
#50	51.8		
#80	26.6		
#100	21.5		
#200	13.2		

* (no specification provided)

Material Description

Brown Fine to Coarse Sand, Little Gravel, Silt and Clay

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{90}= 3.7301 D_{85}= 1.6864 D_{60}= 0.3404
D_{50}= 0.2917 D_{30}= 0.1976 D_{15}= 0.1003
D_{10}= 0.0158 C_u= 21.51 C_c= 7.25

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

NP=Non-Plastic

Sample Number: MW114 **Depth:** 13.5'-15'

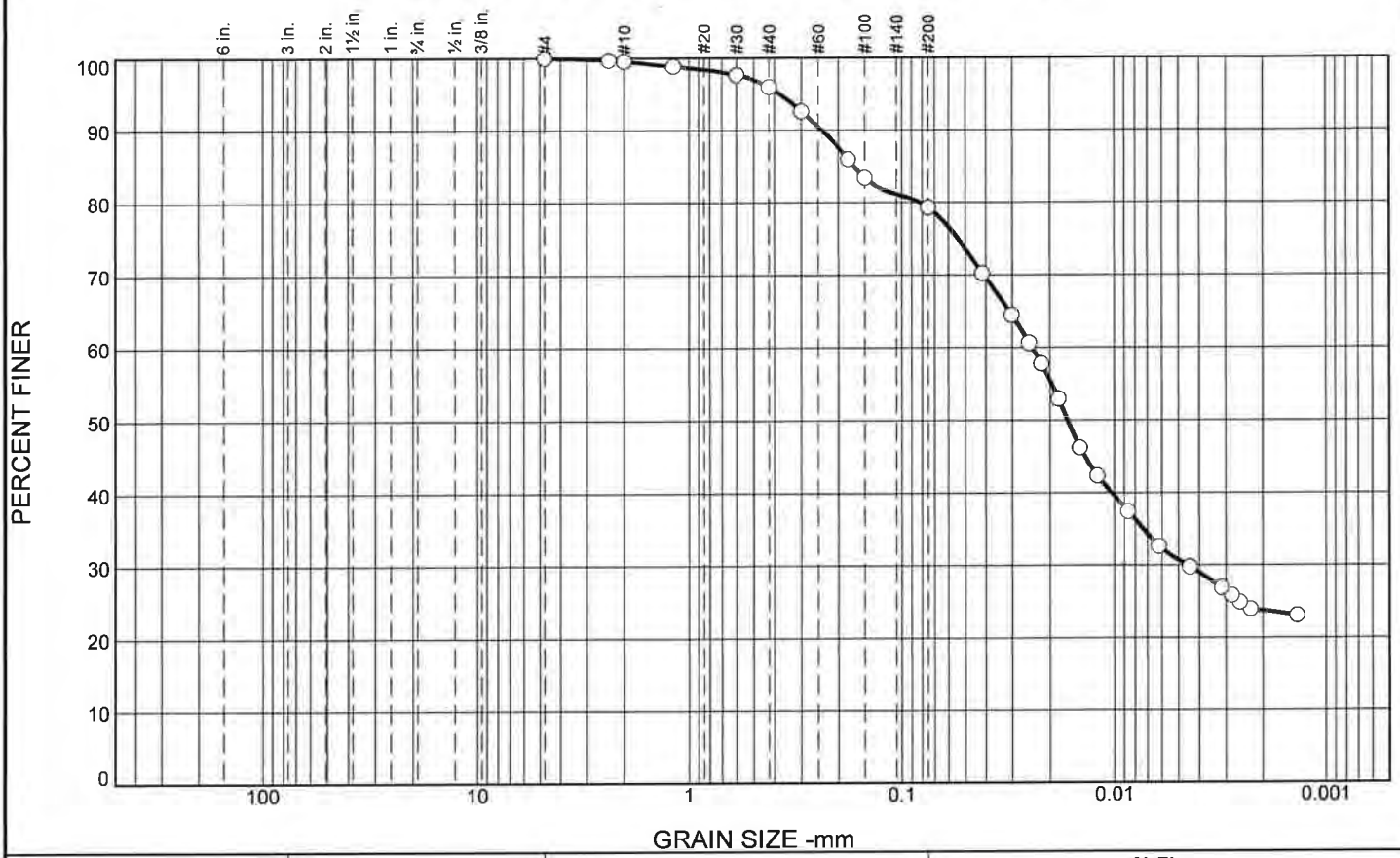
Date: 3/27/23

CGC, Inc.

Client: SCS Engineers
Project: Dane County Yahara Hills
Project No: C22011-8 **Figure**

Tested By: JFS **Checked By:** KJS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	3.6	16.7	48.6	30.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.7		
#10	99.6		
#16	98.9		
#30	97.7		
#40	96.0		
#50	92.6		
#80	86.0		
#100	83.4		
#200	79.3		

* (no specification provided)

Material Description

Brown Lean Clay, Some Sand

Atterberg Limits

PL= 19 LL= 42 PI= 23

Coefficients

D_{90}= 0.2407 D_{85}= 0.1683 D_{60}= 0.0243
D_{50}= 0.0166 D_{30}= 0.0046 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(18)

Remarks

Sample Number: MW-114 **Depth:** 3.5'-5'

Date: 3/8/23

CGC, Inc.

Client: SCS Engineers
Project: Dane Couty Yahara Hills

Project No: C22011-8 **Figure**

Tested By: JFS **Checked By:** KJS

MW-114A

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-114A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dylan Martin, Subsurface Exploration Services Scott Klumb, Soils & Engineering Services, Inc.	2/15/2023	3/6/2023	HSA, 4.25" ID & Air Rotary

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD859	--	MW-114A	--	897.1 Feet MSL	8.3" & 6"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,415 N, 2,168,485 E S/C/N
SW 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind drilled to 20' bgs. (See MW-114 log for lithology from 0 to 16' bgs.) Subsurface Exploration Services cored hole from 20' to 50' bgs on 2/15-16/2023. Soils & Engineering Services, Inc. reamed hole to 6" diameter using air rotary on 3/6/2023 and set well MW-114A at 49.3' bgs.										
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											
			13											
			14											
			15											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Adam Watson	Firm	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-114A Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	Blind drilled to 20' bgs.										
			17											
			18											
			19											
			20											
			21	SANDSTONE (SS2), white (2.5Y 8/1), light gray (2.5Y 7/1), gray (2.5Y 5/1), pale brown (2.5Y 7/4), and reddish yellow (7.5YR 6/8), fine to medium grained, well sorted, planar to cross-bedded. (Ancell Group, St. Peter Formation, Tonti Member)										
			22		SS2									
Run 1	48		23											FF=3.5/ft Percent Recovery=80% RQD=9%, very poor
			24											
			25	SANDSTONE (SS3), gray (2.5Y 5/1), black (2.5Y 2.5/1), reddish brown (5YR 4/4), and light greenish gray (Gley 1 5GY 7/1), fine to coarse grained, poorly sorted, with clay and coarse clasts of dolomite. (Ancell Group, St. Peter Formation, Readstown Member)										
			26											
			27		SS3									
Run 2	18		28											FF=2.67/ft Percent Recovery=30% RQD=0%, very poor
			29											
			30											
			31	DOLOMITE (DL3), gray (5Y 5/1) and light gray (5Y 7/1), massive to planar laminated bedding, with greenish gray (Gley 1 5GY 5/1) clay and white sand within fractures. (Prairie du Chien Group, Shakopee Formation, Willow River Member)										
			32											
Run 3	60		33											FF=2.66/ft Percent Recovery=82% RQD=65%, fair
			34											
			35		DL3									
			36											
			37											
Run 4	44		38											FF=2.18/ft Percent Recovery=73% RQD=27%, poor Last 1.5' of run was sticky and washed out in cuttings.
			39											
			40											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-114A Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
Run 5	48		41 42 43 44 45 46 47	SANDSTONE (SS), yellow (2.5Y 7/8) and light gray (2.5Y 7/1), fine to coarse grained, poorly sorted, dolomitic, with chert clasts and green clay within fractures. (Prairie du Chien Group, Shakopee Formation, New Richmond Member) More dolomitic, sandstone is cemented with dolomite. Kh = 9.60E-04 cm/s	DL3									FF=4.25/ft Percent Recovery=80% RQD=14%, very poor
Run 6	60		48 49 50											FF=3/ft Percent Recovery=100% RQD=26%, poor
				End of boring at 50' bgs in sandstone. Reamed hole to 6" diameter using air rotary and constructed well from 49.3' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name Dane County Landfill Site No. 3 (Proposed)	**Local Grid Location of Well** ☐ ft. ☐ N. ☐ S. ☐ ft. ☐ E. ☐ W.	**Well Name** MW-114A
Facility License, Permit or Monitoring No. --	**Local Grid Origin** ☐ (estimated: ☐) or **Well Location** ☐ Lat. ° ' " Long. ° ' " or	**Wis. Unique Well No.** WD859
Facility ID --	**St. Plane** 378415.03 ft. N, 2168485.03 ft. E. S/C/N	**DNR Well ID No.** --
Type of Well Well Code 12 / PZ	**Section Location of Waste/Source** SW 1/4 of SE 1/4 of Sec. 27, T. 7 N, R. 10 ☒ E ☐ W	**Date Well Installed** 03 / 06 / 2023 (m m d d y y y y)
Distance from Waste/ Source ft. **Enf. Stds. Apply** ☒	**Location of Well Relative to Waste/Source** u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	**Gov. Lot Number**
		Well Installed By: Name (first, last) and Firm Scott Klumb Soils &Engineering Services, Inc.

A. Protective pipe, top elevation 899.67 ft. MSL

B. Well casing, top elevation 899.66 ft. MSL

C. Land surface elevation 897.1 ft. MSL

D. Surface seal, bottom 862.6 ft. MSL or 34.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☒

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☒ 50
Hollow Stem Auger ☐ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☒ 01
Drilling Mud ☐ 03 None ☐ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 897.1 ft. MSL or 0 ft.

F. Fine sand, top 862.6 ft. MSL or 34.5 ft.

G. Filter pack, top 855.5 ft. MSL or 41.6 ft.

H. Screen joint, top 853.1 ft. MSL or 44 ft.

I. Well bottom 847.8 ft. MSL or 49.3 ft.

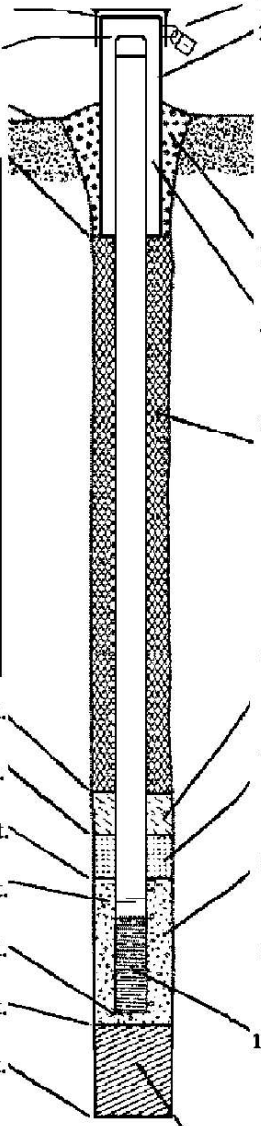
J. Filter pack, bottom 847.1 ft. MSL or 50 ft.

K. Borehole, bottom 847.1 ft. MSL or 50 ft.

L. Borehole, diameter 6.0 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☒ 30 Concrete ☐ 01 Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 Other ☒
Filter Sand
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. 20 % Bentonite . . . . . Bentonite-cement grout ☒ 50
e. 14.83 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☒ 02 Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☒ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. Pell plug, bentonite pellets Other ☒
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ☒
b. Volume added 0.5 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40 ☒
b. Volume added 1.375 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 5 ft.
11. Backfill material (below filter pack): None ☒ 14 Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292 , 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-114A

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
--	13	WD859	--

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 105 min.

4. Depth of well (from top of well casisng) 51.9 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 11.4 gal.

7. Volume of water removed from well 85.6 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	5.90 ft.	11.32 ft.
Date b.	03/15/2023 (m m d d y y y y)	03/15/2023 (m m d d y y y y)
Time c.	2:05 ☐ a.m. ☒ p.m.	4:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	. inches	. inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
	Chocolate milk	slightly cloudy in full bucket
		appears clear in half full bucket,
		color is clear.

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	- mg/l	924.0 mg/l
15. COD	- mg/l	- mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Bridget Last Name: Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:
- 10 well volumes = 114 gallons
- Surged and purged 30 minutes, surged/purged 20 min with bailer and 3.5 gallon, did more surge/purge with pump
- 5 min to fill bucket

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Bridget Russell
Print Name: Bridget Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		B-115C

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dylan Martin Subsurface Exploration Services	2/16/2023	2/17/2023	HSA 4.25" ID NQ Core

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
--	--	--	--	896.3 Feet MSL	8.3" & 3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,504 N, 216,031 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind drilled to 12' bgs. (See MW-115 log for lithology from 0' to 15.5' bgs.)										
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
Run 1	34		12	DOLOMITE (DL4), light gray (2.5Y 7/1) and yellow (2.5Y 7/8), sandy, massive to planar laminated bedding, with round, oval, and elongated vugs, chert, and dendrites, gray and green clay within some fractures, trace glauconite. (Prairie du Chien Group, Oneota Formation).	DL4										FF=1.77/ft Percent Recovery=94% RQD=30%, poor
			13											
			14											
			15											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Adam Watson	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-115C Use only as an attachment to Form 4400-122.

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	DOLOMITE (DL4), light gray (2.5Y 7/1) and yellow (2.5Y 7/8), sandy, massive to planar laminated bedding, with round, oval, and elongated vugs, chert, and dendrites, gray and green clay within some fractures, trace glauconite. (Prairie du Chien Group, Oneota Formation).										
			17											
Run 2	48		18											FF=2/ft Percent Recovery=80% RQD =42%, poor
			19											
			20											
			21											
			22											
Run 3	60		23											FF=3.4/ft Percent Recovery=100% RQD=35%, poor
			24											
			25		DL4									
			26	Light gray (2.5Y 7/1), dark gray (2.5Y 4/1), and yellow (2.5Y 7/8).										
			27											
Run 4	60		28											FF=3.4/ft Percent Recovery=100% Recovery=100% RQD=18%, very poor
			29											
			30											
			31											
			32											
Run 5	30		33											FF=3.2/ft Percent Recovery=50% RQD=8%, very poor
			34											
			35	DOLOMITIC SANDSTONE (DL4), white (2.5Y 8/1) and light gray (2.5Y 7/1), with greenish gray (GLEY 1 5GY 5/1) clay. (Prairie du Chien Group, Oneota Formation).										
			36											
			37		DL4									
Run 6	57.5		38											FF=3.55/ft Percent Recovery=95% RQD=44%, poor
			39											
			40											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-115C Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				End of boring at 40' bgs in dolomitic sandstone. Abandoned with bentonite grout and bentonite chips.										

State of Wis., Dept. of Natural Resources SCS No. 25222268.00
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☒ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _	B-115C

Latitude / Longitude (see instructions) _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ SE	¼ SE	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☒ E ☐ W

Well Street Address: 7101 US Highway 12 & 18

Well City, Village or Town	Well ZIP Code
Madison, WI	53718

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
Temporary Borehole	_ _ _ _ _

2. Facility / Owner Information

Facility Name: Dane County Landfill No.3 (Proposed)
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner: Dane County Department of Waste and Renewables
Present Well Owner: Dane County Department of Waste and Renewables
Mailing Address of Present Owner: 1919 Alliant Energy Center Way

City of Present Owner	State	ZIP Code
Madison	WI	53713

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 02/16/2023
If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☒ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
40	NA

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
8.3 to 3.0	NA

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)
NA	~3.3

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Liner(s) perforated?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☒ Yes	☐ No	☐ N/A
If yes, was hole retopped?	☒ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☒ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☒ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☒ Bentonite Grout
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" Bentonite Chips	Surface	2	50 lbs	dry mix
Bentonite Grout	2	40	24-gallons	2lbs/gal

6. Comments

Boring B-115C

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Subsurface Exploration Services		02/17/2023

Street or Route	Telephone Number
2900 Lowell Dr.	(920)544-4226

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Green Bay	WI	54311		02/17/2023

DNR Use Only

Date Received	Noted By

Comments:

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-115

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Tony Kapugi On-site Environmental Services, Inc.	1/12/2023	1/13/2023	HSA, 4.25" ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD840	--	MW-115	892.1 Feet MSL	896.3 Feet MSL	8.3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,504 N, 2,169,031 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	SILT (ML),very dark grayish brown (10YR 3/2), organic rich, with roots. (Topsoil)	ML									
S1	47		2	LEAN CLAY (CL), yellowish brown (10YR 5/4), mostly silt with clay, trace gravel, stiff, cohesive, uniform, massive, trace roots. (Loess)	CL				1.0	M/W				Depth to water measured at 3' bgs.
			3											
			4											
			5	SILTY SAND (SM), brown (7.5YR 5/4), mostly fine sand with medium to coarse sand and some clay, fine and coarse gravel (mostly dolomite), uniform, massive, very soft. (Till) (Holy Hill Formation, Horicon Member)	SM									
			6											
S2	53		7							W				
			8											
			9	Kh = 1.71E-02 cm/s										
			10	At 9' to 10', SILTY SAND (SM) % g-s-si-cl = 29-44-20-8										
S3	12		11	SILTY GRAVEL (GM), light olive brown (2.5Y 5/6), fine to coarse, with fine to coarse sand, silt, and clay. (Weathered Dolomite Bedrock) Pale brown (2.5Y 7/4) with trace silt.	GM					W				Refusal with geoprobe at 11' bgs. Drilled with HSA from 0' to 15.5' bgs and sampled off the auger.
			12	DOLOMITE (DL4) See log B-115C. (Prairie du Chien, Oneota Formation).	DL4									
			13											
			14											
			15	White (2.5Y 8/1) and pale brown (2.5Y 8/2).										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Adam Watson	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-115 Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				DOLOMITE (DL4) See log B-115C. (Prairie du Chien, Oneota Formation). End of boring at 15.5' bgs in dolomite. Constructed well from 15.3' bgs.	DL4									

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Dane County Landfill Site No. 3 (Proposed)	Local Grid Location of Well: ☐ft. ☐N. ☐S. ☐ft. ☐E. ☐W.	Well Name: MW-115
Facility License, Permit or Monitoring No.: --	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WD840 / DNR Well ID No.: --
Facility ID: --	St. Plane 387503.89 ft. N, 2169031.39 ft. E. S/C/N	Date Well Installed: 01 / 13 / 2023 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Scott Klumb / Soils & Engineering Services, Inc.
Distance from Waste/Source ft. / Enf. Stds. Apply ☒	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation 899.28 ft. MSL
B. Well casing, top elevation 899.25 ft. MSL
C. Land surface elevation 896.3 ft. MSL
D. Surface seal, bottom 892.3 ft. MSL or 4 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐

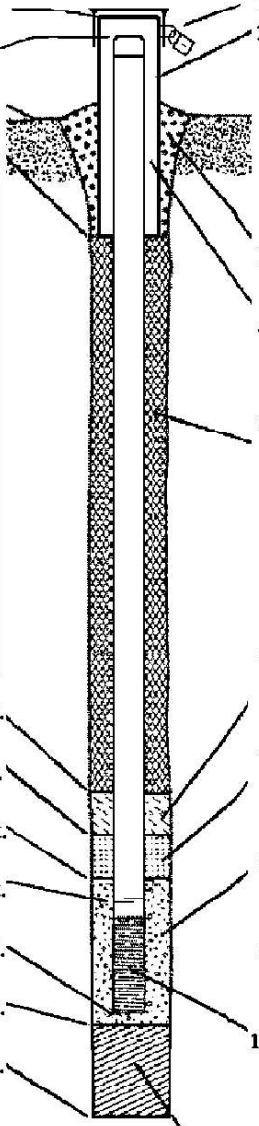
15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 896.3 ft. MSL or 0 ft.
F. Fine sand, top -- ft. MSL or -- ft.
G. Filter pack, top 892.3 ft. MSL or 4 ft.
H. Screen joint, top 891.3 ft. MSL or 5 ft.
I. Well bottom 881.0 ft. MSL or 15.3 ft.
J. Filter pack, bottom 880.8 ft. MSL or 15.5 ft.
K. Borehole, bottom 880.8 ft. MSL or 15.5 ft.
L. Borehole, diameter 8.3 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☒ 30 / Concrete ☐ 01 / Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 / Other ☒
Filter Sand
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 2.07 Ft^3 volume added for any of the above
f. How installed: 2, 5016 bags
1ft^3/bag bentonite
0.5ft^3/sand bag
Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. -- ☐
b. Volume added -- ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. RW Sidley #5 ☒
b. Volume added 10.5 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-115

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
--	13	WD840	--

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 78 min.

4. Depth of well (from top of well casisng) 156 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 95 gal.

7. Volume of water removed from well 103.3 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 5.35 ft.	5.54 ft.
Date	b. 02/01/2023 (m m d d y y y y)	02/01/2023
Time	c. 11:20 ☒ a.m. ☐ p.m.	12:38 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	2.0 inches	<1.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
(Describe)	light brown color, no odor	slight green tint, no odor

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	---.- mg/l	24,300.0 mg/l
15. COD	---.- mg/l	---.- mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Ethan Last Name: Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:

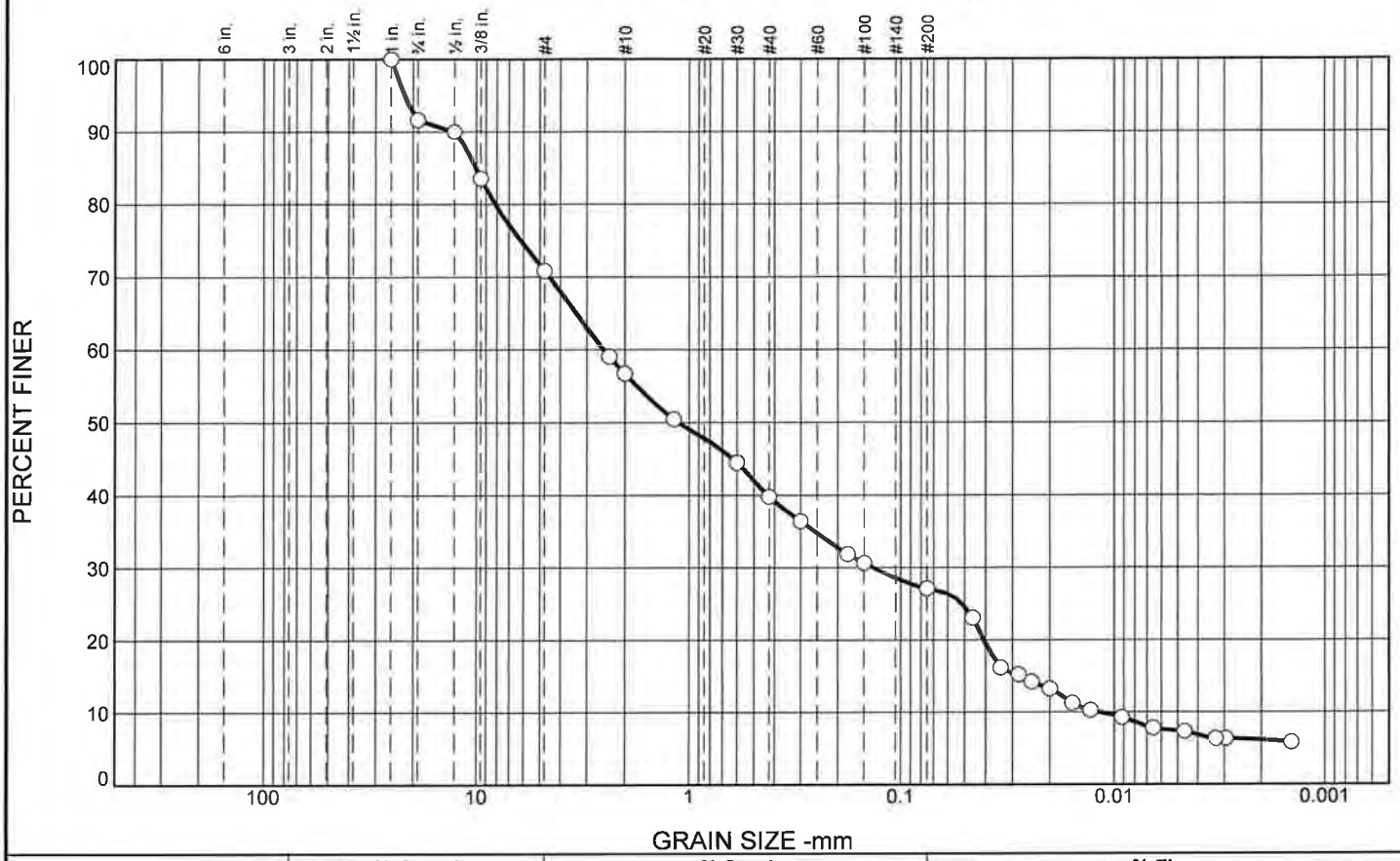
- Surged and purged with bailer for 30 minutes
- 10 well volumes: 95.0 gallons
- Bailed 15 gallons
- Pumped with Grunfoss
- Pump rate: 2.22gpm
- Pumped 88.26 gallons and it went clear

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Ethan Schaefer
Print Name: Ethan Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	8.4	20.8	14.1	16.9	12.7	19.6	7.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
3/4	91.6		
1/2	89.9		
3/8	83.6		
#4	70.8		
#8	59.1		
#10	56.7		
#16	50.5		
#30	44.5		
#40	39.8		
#50	36.4		
#80	31.9		
#100	30.7		
#200	27.1		

* (no specification provided)

Material Description

Light Brown Fine to Coarse Sand, Some Silt and Gravel, Little Clay

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{90}= 12.9226 D_{85}= 10.0766 D_{60}= 2.5105
D_{50}= 1.1199 D_{30}= 0.1354 D_{15}= 0.0271
D_{10}= 0.0117 C_u= 214.03 C_c= 0.62

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

NP=Non-Plastic

Sample Number: MW115 **Depth:** 9'-10'

Date: 3/29/23

CGC, Inc.

Client: SCS Engineers
Project: Dane County Yahara Hills
Project No: C22011-8 **Figure**

Tested By: JFS **Checked By:** KJS

MW-116

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-116

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils & Engineering Services, Inc.	1/18/2023	1/19/2023	HSA, 4.25" ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD843	--	MW-116	892.4 Feet MSL	901.4 Feet MSL	8.3"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,468 N, 2,169,728 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S1	22	0 3 3 3	1	SILT (ML), very dark grayish brown (10YR 3/2), organic rich, with roots. (Topsoil)	ML									
			2	LEAN CLAY (CL), dark yellowish brown, (10YR 4/4) with black mottling, mostly silt with clay, soft, cohesive, uniform, massive, trace roots. (Loess)	CL				1.0 1.75	M				
			3											
S2	16	3 3 4	4	SILTY SAND (SM), strong brown (7.5YR 4/6), mostly fine sand with medium to coarse sand and some clay, fine and coarse gravel (mostly dolomite), uniform, massive. (Till) (Holy Hill Formation, Horicon Member)	SM				0.75	M				
			5											
			6	Strong brown (7.5YR 5/6).										
S3	14	3 5 3	7							M				
			8											
S4	13	18/6" 82/3"	9	SANDSTONE (SS2), yellow (10YR 8/8), silty, mostly fine sand with medium grained sand and fine gravel, uniform, massive. (Ancell Group, St. Peter Formation, Tonti Member)	SS2					W				Driller noted harder soils at 9' bgs. Depth to water at ~9' bgs.
			10											
S5	9	100/4"	11							W				
			12											
			13											
S6	3	100/1"	14							W				
			15											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Adam Watson	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-116 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
S7	3	100/1.5"	16–17	SANDSTONE (SS2), yellow (10YR 8/8), silty, mostly fine sand with medium grained sand and fine gravel, uniform, massive. (Ancell Group, St. Peter Formation, Tonti Member) Kh = 4.50E-04 cm/s	SS2					W				
S8	3	100/1.5"	18–20	At 18.5' to 20', SILTY SAND (SM) %g-s-si+cl = 4-83-14						W				
S9	3	100/1.5"	23–25	Trace white and green clay.						W				
			26	End of boring at 26' bgs in sandstone. Constructed well from 25.3' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Dane County Landfill Site No. 3 (Proposed)	Local Grid Location of Well ☐ ft. ☐N. ☐S. ☐ ft. ☐E. ☐W.	Well Name: MW-116
Facility License, Permit or Monitoring No.: --	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WD843 / DNR Well ID No.: --
Facility ID: --	St. Plane 378468.41 ft. N, 2169727.68 ft. E. S/C/N	Date Well Installed: 01 / 19 / 2023 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Scott Klumb / Soils & Engineering Services, Inc.
Distance from Waste/Source ft. / Enf. Stds. Apply ☒	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation 905.86 ft. MSL
B. Well casing, top elevation 903.85 ft. MSL
C. Land surface elevation 901.4 ft. MSL
D. Surface seal, bottom 890.4 ft. MSL or 11 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☒ Yes ☐ No

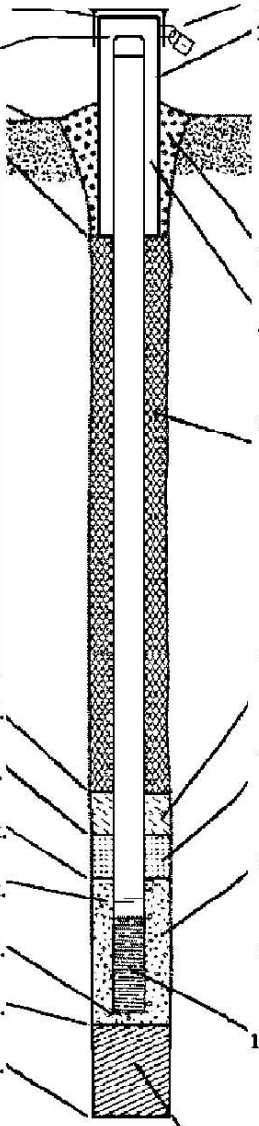
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 901.4 ft. MSL or 0 ft.
F. Fine sand, top 890.4 ft. MSL or 11 ft.
G. Filter pack, top 888.9 ft. MSL or 12.5 ft.
H. Screen joint, top 886.4 ft. MSL or 15 ft.
I. Well bottom 876.1 ft. MSL or 25.3 ft.
J. Filter pack, bottom 875.4 ft. MSL or 26 ft.
K. Borehole, bottom 875.4 ft. MSL or 26 ft.
L. Borehole, diameter 8.3. in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☒ 30 / Concrete ☐ 01 / Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 / Other ☒
Filter Sand
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 3.06 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ☒
b. Volume added 0.25 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40 ☒
b. Volume added 2.0 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-116

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
--	13	WD843	--

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 70 min.

4. Depth of well (from top of well casisng) 27.7 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 6.7 gal.

7. Volume of water removed from well 19.0 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 20.42 ft.	21.83 ft.
Date	b. 01/26/2023 (m m d d y y y y)	01/26/2023 (m m d d y y y y)
Time	c. 8:40 ☒ a.m. ☐ p.m.	9:50 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	0.7 inches	inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☐ 20 Turbid ☒ 25
(Describe)	light brown color; no odor	light brown color; no odor

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	---.- mg/l	2,550.0 mg/l
15. COD	---.- mg/l	---.- mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Ethan Last Name: Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:

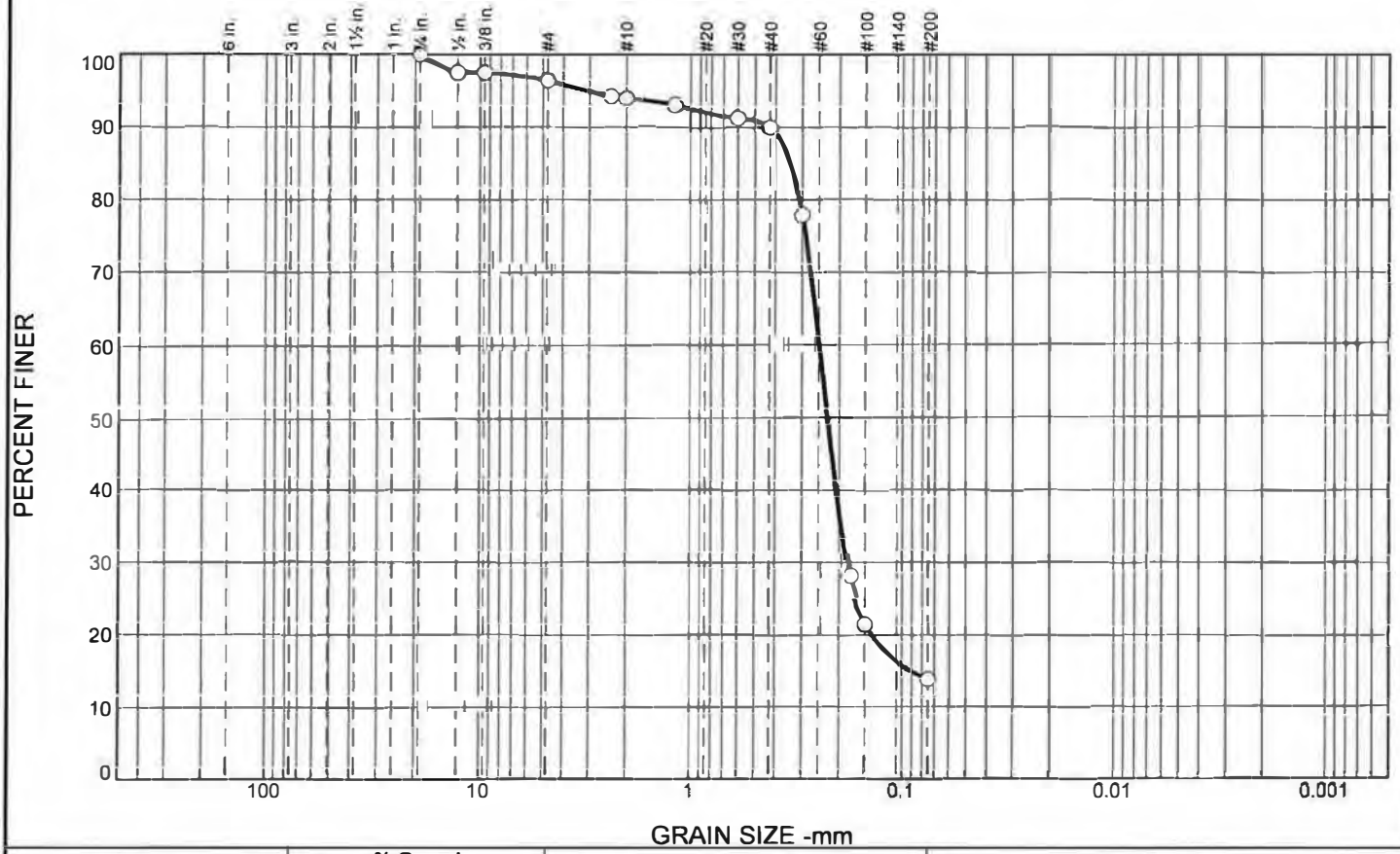
- Surged and purged with bailer for 30 minutes, purged 9 gallons
- 10 well volumes: 67 gallons
- Pumped dry after 4 gallons, resumed surging and purging
- Purged dry 3 times for a total of 19.0 gallons purged
- Stickup height: 2.9 feet
- Total depth after purging: 28.4 feet

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Ethan Schaefer
Print Name: Ethan Schaefer
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.5	2.5	4.0	76.1	13.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	97.6		
3/8	97.6		
#4	96.5		
#8	94.3		
#10	94.0		
#16	93.0		
#30	91.3		
#40	90.0		
#50	77.8		
#80	28.2		
#100	21.5		
#200	13.9		

* (no specification provided)

Material Description

Brown Fine Sand, Some Silt, Trace Gravel

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{90}= 0.4264 D_{85}= 0.3404 D_{60}= 0.2495
D_{50}= 0.2281 D_{30}= 0.1851 D_{15}= 0.0910
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

NP=Non-Plastic

Sample Number: MW116 **Depth:** 18.5'-20'

Date: 3/27/23

CGC,Inc.

Client: SCS Engineers
Project: Dane County Yahara Hills

Project No: C22011-8 **Figure**

Tested By: JFS **Checked By:** KJS

MW-116A

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill No. 3 (Proposed) SCS#: 25222268.00		MW-116A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
John Wagner, Subsurface Exploration Services Scott Klumb, Soils & Engineering Services, Inc.	2/21/2023	3/7/2023	HSA, 4.25" ID & Air Rotary

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WD858	--	MW-116A	--	900.8 Feet MSL	8.3" & 6"

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,477 N, 2,169,728 E S/C/N
SE 1/4 of SE 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	City of Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind drilled to 23' bgs. (See MW-116 log for lithology from 0' to 26' bgs). Subsurface Exploration Services cored hole from 23' to 60' bgs on 2/21-22/2023. Soils & Engineering Services, Inc. reamed hole to 6" diameter using air rotary on 3/7/2023 and set well MW-116A at 59.3' bgs.										
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											
			13											
			14											
			15											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Adam Watson	SCS Engineers 2830 Dairy Drive, Madison, WI 53718

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-116A Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16											
			17											
			18											
			19											
			20											
			21											
			22											
			23	SANDSTONE (SS2), yellow (10YR 8/8) and orange, fine to coarse grained, well sorted, massive, with iron inclusions and iron staining. (Ancell Group, St. Peter Formation, Tonti Member)										
Run 1	8		24		SS2									FF=0.5/ft Percent Recovery=33% RQD=19%, very poor
			25											
			26	White (2.5Y 8/1) and red (2.5YR 4/6), with calcite veins.										
			27											
Run 2	17		28											FF=5/ft Percent Recovery=28% RQD=0%, very poor
			29											
			30											
			31											
			32											
Run 3	53		33											FF=4.8/ft Percent Recovery=88% RQD=16%, very poor
			34											
			35											
			36	Planar laminated bedding.										
Run 4	24		37											FF=3.5/ft Percent Recover=88% RQD=36%, poor
			38											
			39											
Run 5	32.4		40											FF=2.5/ft Percent Recovery=100% RQD=59%, fair

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-116A Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			41	SANDSTONE (SS2), yellow (10YR 8/8) and orange, fine to coarse grained, well sorted, massive, with iron inclusions and iron staining. (Ancell Group, St. Peter Formation, Tonti Member)										
			42											
Run 6	53		43											FF=4.3/ft Percent Recovery=88% RQD=0%, very poor
			44											
			45	Yellowish red (5YR 5/8), cross-bedded from 45' to 47.5' bgs then planar laminated bedded.										
			46											
			47											
Run 7	35		48											FF=3.1/ft Percent Recovery=58% RQD=28%, poor
			49											
			50	Light gray (2.5Y 7/1) inclusions, cross-bedded from 50' to 56' bgs.	SS2									
			51											
			52											
Run 8	54		53											FF=1.3/ft Percent Recovery=90% RQD=61%, fair
			54											
			55	Kh = 4.00E-03 cm/s Pale brown (2.5Y 7/4).										
			56											
			57											
Run 9	60.4		58											FF=1.4/ft Percent Recovery=100% RQD=63%, fair
			59	SANDSTONE (SS3), white (2.5Y 8/1) and light gray (2.5Y 7/1), fine to coarse grained, poorly sorted, with clay and dolomite clasts. (Ancell Group, St. Peter Formation, Readstown Member)	SS3									
			60	End of boring at 60.4' bgs in sandstone. Reamed hole to 6" diameter using air rotary and constructed well from 59.3' bgs.										

SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Dane County Landfill Site No. 3 (Proposed)	Local Grid Location of Well ☐N. ☐S. ____ ft. ☐E. ☐W. ____ ft.	Well Name: MW-116A
Facility License, Permit or Monitoring No.: --	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WD858 / DNR Well ID No.: --
Facility ID: --	St. Plane 378476.79 ft. N, 2169728.04 ft. E. S/C/N	Date Well Installed: 03 / 07 / 2023 (m m d d y y y y)
Type of Well: Well Code 12 / PZ	Section Location of Waste/Source: SE 1/4 of SE 1/4 of Sec. 25, T. 7 N, R. 10 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Scott Klumb / Soils & Engineering Services, Inc.
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☒	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:

A. Protective pipe, top elevation 903.34 ft. MSL
B. Well casing, top elevation 903.35 ft. MSL
C. Land surface elevation 900.8 ft. MSL
D. Surface seal, bottom 850.7 ft. MSL or 50.1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☒

13. Sieve analysis performed? ☐ Yes ☒ No

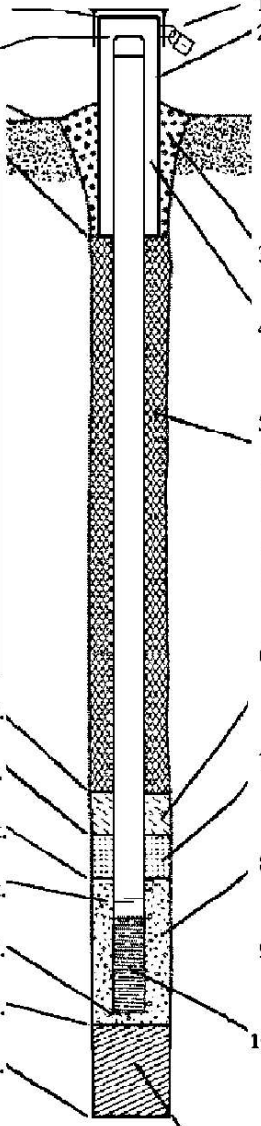
14. Drilling method used: Rotary ☒ 50 / Hollow Stem Auger ☐ 41 / Other ☐

15. Drilling fluid used: Water ☐ 02 / Air ☒ 01 / Drilling Mud ☐ 03 / None ☐ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe N/A

17. Source of water (attach analysis, if required):
N/A

E. Bentonite seal, top 900.8 ft. MSL or 0 ft.
F. Fine sand, top 850.7 ft. MSL or 50.1 ft.
G. Filter pack, top 849.0 ft. MSL or 51.8 ft.
H. Screen joint, top 846.8 ft. MSL or 54 ft.
I. Well bottom 841.5 ft. MSL or 59.3 ft.
J. Filter pack, bottom 839.4 ft. MSL or 61.4 ft.
K. Borehole, bottom 839.4 ft. MSL or 61.4 ft.
L. Borehole, diameter 6.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☒ 30 / Concrete ☐ 01 / Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 30 / Other ☒
Filter Sand
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. 20 % Bentonite . . . . . Bentonite-cement grout ☒ 50
e. 14.8 Ft^3 volume added for any of the above
f. How installed: Tremie ☒ 01 / Tremie pumped ☒ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☒ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. Pel-plug Bentonite Pellets Other ☒
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15 ☒
b. Volume added 0.5 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40 ☒
b. Volume added 1.5 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐
10. Screen material: Sch. 40 PVC
a. Screen type: Factory cut ☒ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer Campbell (Monoflex)
c. Slot size: 0.01 in.
d. Slotted length: 5 ft.
11. Backfill material (below filter pack): None ☒ 14 / Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

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SCS # 25222268.00

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☒
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Dane County Landfill No. 3 (Proposed)	Dane	MW-116A

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
--	13	WD858	--

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☒ 41
surged with bailer and pumped	☒ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well: 65 min.

4. Depth of well (from top of well casisng): 62.1 ft.

5. Inside diameter of well: 2.07 in.

6. Volume of water in filter pack and well casing: 10.8 gal.

7. Volume of water removed from well: 48.8 gal.

8. Volume of water added (if any): 0.0 gal.

9. Source of water added: NA

10. Analysis performed on water added? (If yes, attach results) ☐ Yes ☒ No

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	18.13 ft.	18.30 ft.
Date b.	03/17/2023 (m m d d y y y y)	03/17/2023 (m m d d y y y y)
Time c.	9:15 ☒ a.m. ☐ p.m.	10:20 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	~2.0 inches	~3.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) light brown cloudy	Clear ☒ 20 Turbid ☐ 25 (Describe) clear in bucket, even after surging; light brown hue in sample bottle

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	---.- mg/l	983.0 mg/l
15. COD	---.- mg/l	---.- mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Bridget Last Name: Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:

- 10 well volumes = 108 gallons
- Surged and purged 30 minutes, purged 10 min and 2 gallons with bailer
- Used monsoon for last of purge and surge, and pumped until clear
- Took 4.5 min for a 5 gal bucket to fill

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Allison Last Name: Rathsack
Facility/Firm: Dane County Dpt. of Waste & Renewables
Street: 1919 Alliant Energy Center Way
City/State/Zip: Madison, WI 53713

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Bridget Russell
Print Name: Bridget Russell
Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

NOTE: See instructions for more information including a list of county codes and well type codes.