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

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 Site No. 3	N/A	B-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/1/2022	2/1/2022	HSA 2.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			863.7 Feet MSL	875.0 Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 379,854 N, 2,168,432 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 ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	18 16	4 4 5	1–5	Silt (ML), few clay, trace subangular gravel, dark yellowish brown (10YR 4/6), non-plastic, dry, very stiff (loess/lacustrine)	ML				3.5					
2 SS	24 22	4 6 7 8	8–12	Lean Clay (CL), few silt, dark yellowish brown (10YR 4/6), highly plastic, moist, very stiff (loess/lacustrine) Sand with silt and gravel (SP-SM), brown (10YR 5/3), fine to medium grained, wet, medium dense (outwash)	CL SP-SM		▼		3.25					Wet soil noticed at 8.5 feet

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

Signature	Firm	Tel:
Logan Dwyer	Tetra Tech 8413 Excelsior Dr Suite 160 Madison, WI 53714	Fax:

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 B-1 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: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			13	Sand with silt and gravel (SP-SM), brown (10YR 5/3), fine to medium grained, wet, medium dense (outwash) *(continued)*										
3 SS	24 18	4 6 7 9	14	yellowish brown (10YR 5/4)						14.3			7.9	Lab classified as SP-SM Screen zone bag sample S7 - 14-16ft
			15											
			16											
			17											
			18											
4 SS	24 20	7 8 8 8	19	fine sand, coarse sand seem 19.2-19.5ft, very loose										
			20											
			21		SP-SM									
			22											
			23											
5 SS	24 13	10 10 10 13	24	few subangular gravel, yellowish brown (10YR 5/6), medium										
			25											
			26											
			27											
			28											
6 SS	24 19	11 17 17 14	29											
			30	Silt (ML), trace fine sand, yellowish brown (10YR 5/4), non-plastic, moist, soft (glacio-lacustrine)					0.5					
			31		ML									
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-1 Use only as an attachment to Form 4400-122. Page 3 of 4

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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			33	Silt (ML), trace fine sand, yellowish brown (10YR 5/4), non-plastic, moist, soft (glacio-lacustrine) *(continued)*	ML									
7 SS	24 12	8 13 19 22	34	Poorly graded fine sand (SP), few silt, yellowish brown (10YR 5/6), wet, dense (outwash)										
			35											
			36											
			37											
			38											
8 SS	24 19	16 19 22 29	39	some silt	SP									
			40	trace silt										
			41											
			42											
			43	Poorly (SP-SM)										Driller encountered cobbles and gravel while drilling
9 SS	24 14	16 18 21 22	44	~~Well~~ graded sand (~~SW~~), few dolomite fragments, few silt, yellowish brown (10YR 5/4), medium and coarse sand, wet, dense (outwash)										
			45											
			46											
			47	SP-SM	~~SW~~									
			48											
10 SS	17 15	37 48 15	49											
			50	Highly Weathered Dolomite, some dolomite fragments, few coarse sand, light yellowish brown (10YR 6/4), wet (formation indeterminable due to limited sample)										
			51	(Possible boulder.)										
			52											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-1 Use only as an attachment to Form 4400-122. Page 4 of 4

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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			53	Poorly with silt (SP-SM)										
11 SS	24 18	26 23 27 28	54	~~Well~~ graded sand (~~SW~~), few subangular gravel, trace silt, yellowish brown (10YR 5/6), coarse and medium sand, very dense, wet (outwash)										
			55											
			56											
			57		SP-SM ~~SW~~									
			58											
			59											
			60	End of boring 60' (bottom elevation 815ft MSL)										

SCS edits (in red) based on review of soil samples 8/15/2023.

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B-1

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	___ ___ ___ ___ ___	

Latitude / Longitude (see instructions): 379853.7 N / 2168431.86 W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ NE 1/4 | ¼ SE 1/4 | or Gov't Lot # | Section: 25 | Township: 7 N | Range: 10 ☑ E ☐ W

Well Street Address: Yahara Hills Golf Course 6701 US-12, Madison, WI 53718

Well City, Village or Town: Madison, WI
Well ZIP Code: 53718
Subdivision Name:
Lot #:

Reason for Removal from Service: Sample Only
WI Unique Well # of Replacement Well: ___ ___ ___ ___ ___

2. Facility / Owner Information

Facility Name: Dane County Dept of Waste and Renewables
Facility ID (FID or PWS): 113450480
License/Permit/Monitoring #: N/A
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:
City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 2/1/2022
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.): 60 ft.
Casing Diameter (in.):
Lower Drillhole Diameter (in.): 6 in.
Casing Depth (ft.):

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet): 11.3 ft.

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	10.7	200 lbs	
Haliburton Granular Bentonite Slurry	10.7	48	55 Gallons	28lbs/55gal
Collapsed Formation - sand and gravel	48	60		

6. Comments

Boring B-1

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: Scott Klumb - SES Madison
License #:
Date of Filling & Sealing or Verification (mm/dd/yyyy): 2/1/2022
Street or Route: 1102 Stewart St.
Telephone Number: (608) 274-7600
City: Madison | State: WI | ZIP Code: 53713
Signature of Person Doing Work: Logan Dwyer
Date Signed: 4/14/2022

DNR Use Only
Date Received | Noted By
Comments

MW-1

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 Site No. 3	N/A	MW-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/18/2022	2/21/2022	HSA 4.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WA434	101	MW-1	863.6 Feet MSL	875.5 Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 379,849 N, 2,168,438 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 ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	See boring log "B-1" for soil descriptions										
			2											
			4		ML									
			6											
			8		CL									
			10											
			12	Kh = 4.50E-03 cm/s										
			14							14.3	NV	NP	7.9	Lab classified as SP-SM Screen zone bag sample S7 - 14-16ft from boring B-1
			16		SP-SM									
			18											
			20											
			22	End of boing 23 feet - well set at 22 feet (borehole bottom elevation 852.5ft MSL)										

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

Signature	Firm	Tel:
Logan Dwyer	Tetra Tech 8413 Excelsior Dr Suite 160 Madison, WI 53714	Fax:

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.

SCS edits (in red) based on review of soil & rock samples 8/12/2023.

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	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-1
Facility License, Permit or Monitoring No.: N/A	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WA434 / DNR Well Number: 101
Facility ID: 113450480	St. Plane 379,849 ft. N, 2,168,438 ft. E. S/C/N	Date Well Installed: 02/21/2022
Type of Well: Well Code 11/mw	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: (Person's Name and Firm): Scott Klumb, Soils and Engineering Services
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 878.27 ft. MSL

B. Well casing, top elevation 878.17 ft. MSL

C. Land surface elevation 875.5 ft. MSL

D. Surface seal, bottom 875.5 ft. MSL or 0.0 ft.

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

13. Sieve analysis attached? ☒ Yes ☐ No

14. Drilling method used: Rotary ☐ 5 0 / Hollow Stem Auger ☒ 4 1 / Other ☐

15. Drilling fluid used: Water ☐ 0 2 / Air ☐ 0 1 / Drilling Mud ☐ 0 3 / None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe

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

E. Bentonite seal, top 875.0 ft. MSL or 0.5 ft.

F. Fine sand, top 871.5 ft. MSL or 4.0 ft.

G. Filter pack, top 870.5 ft. MSL or 5.0 ft.

H. Screen joint, top 868.5 ft. MSL or 7.0 ft.

I. Well bottom 853.5 ft. MSL or 22.0 ft.

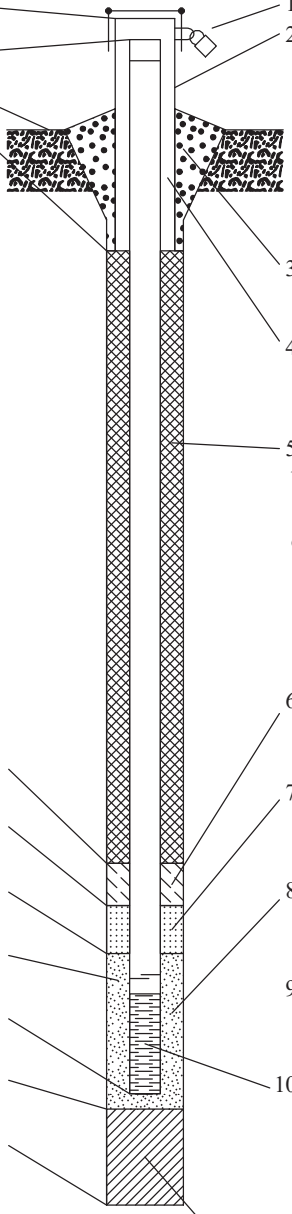
J. Filter pack, bottom 852.5 ft. MSL or 23.0 ft.

K. Borehole, bottom 852.5 ft. MSL or 23.0 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 6.0 ft.
c. Material: Steel ☒ 0 4 / Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:

3. Surface seal: Bentonite ☒ 3 0 / Concrete ☐ 0 1 / Other ☐

4. Material between well casing and protective pipe: Bentonite ☐ 3 0 / Red Flint #40 Other ☒

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. 0.66 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 / Tremie pumped ☐ 0 2 / Gravity ☒ 0 8

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

7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 0.17 ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 3.21 ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 / Flush threaded PVC schedule 80 ☐ 2 4 / Other ☐

10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 / Continuous slot ☐ 0 1 / Other ☐
b. Manufacturer Hole Products - Johnson
c. Slot size: 0.010 in.
d. Slotted length: 15.0 ft.

11. Backfill material (below filter pack): None ☒ 1 4 / Other ☐

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

Signature: Logan Dwyer

Firm: Tetra Tech
8413 Excelsior Dr Suite 160 Madison, WI 53714

Tel:
Fax:

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.

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	Well Name
Dane County Landfill Site No. 3	Dane	MW-1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
N/A	13	WA434	101

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

2. Well development method:

surged with bailer and bailed	☐	4 1
surged with bailer and pumped	☒	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed, and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
other _____	☐	

3. Time spent developing well 60 min.

4. Depth of well (from top of well casing) 24.7 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 8.1 gal.

7. Volume of water removed from well 110.0 gal.

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

9. Source of water added _____

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.	14.60 ft.	14.68 ft.
Date	b.	2/23/2022	2/24/2022
Time	c.	08:40 ☒ a.m. ☐ p.m.	10:05 ☒ a.m. ☐ p.m.
12. Sediment in well bottom		0.0 inches	0.0 inches
13. Water clarity		Clear ☐ 1 0 Turbid ☒ 1 5 (Describe) Tan/brown	Clear ☒ 2 0 Turbid ☐ 2 5 (Describe) Clear

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

14. Total suspended solids	mg/l	3.6	mg/l
15. COD	mg/l		mg/l

16. Well developed by: Person's Name and Firm
Jeff Prior
Soils & Engineering Services

17. Additional comments on development:
Purged 10 gallons with bailer, then pumped @ 2.5 gal/min 8:55AM-9:35AM on 2/24/2022

Facility Address or Owner/Responsible Party Address

Name: Robert Regan

Firm: Dane County Dept of Waste & Renewables

Street: 7102 US-12

City/State/Zip: Madison, Wisconsin 53718

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

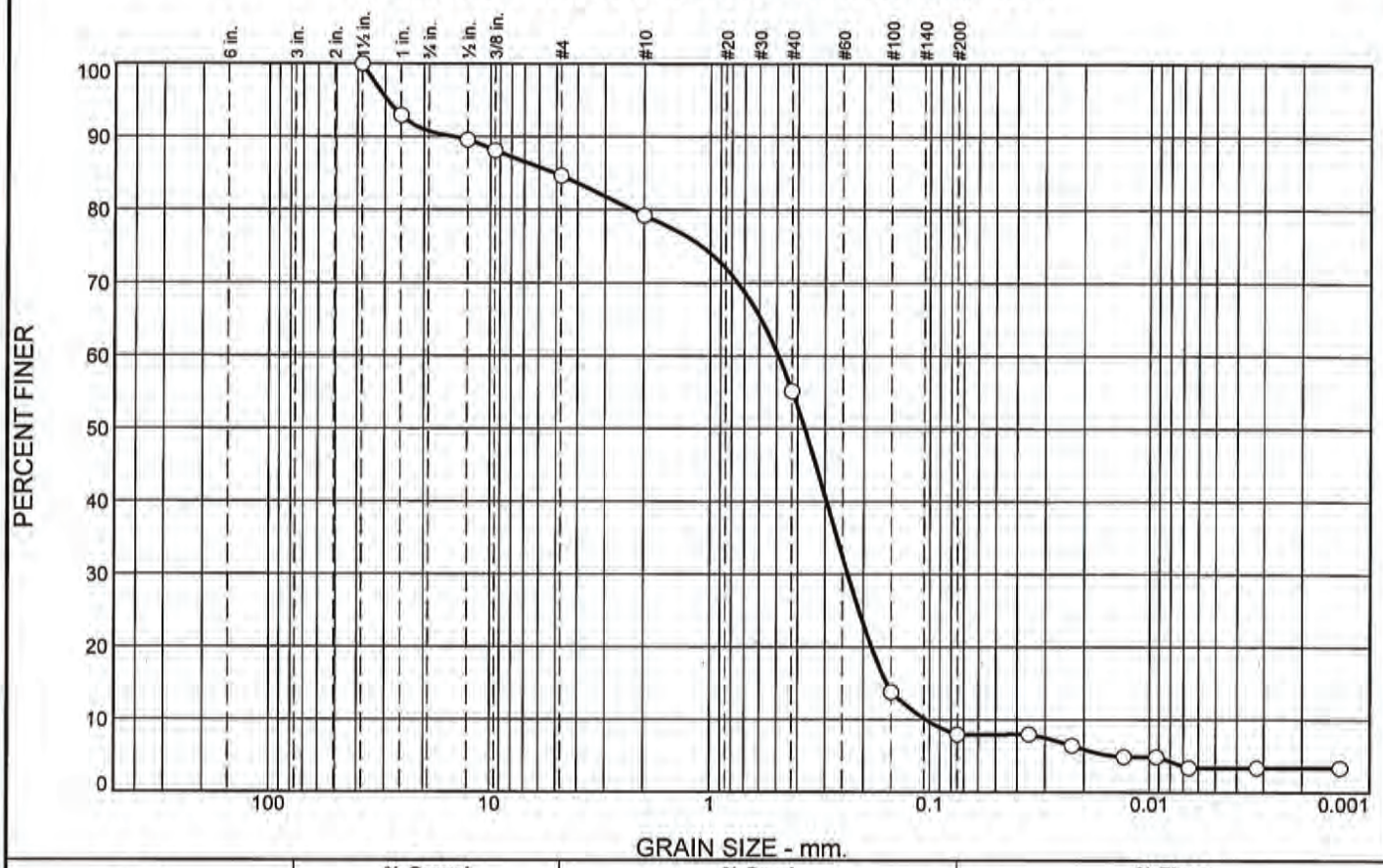
Signature: Logan Dwyer

Print Name: Logan Dwyer

Firm: Tetra Tech

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	9.2	6.1	5.5	24.0	47.3	4.6	3.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0		
1.0	92.9		
0.5	89.6		
0.375	88.1		
#4	84.7		
#10	79.2		
#40	55.2		
#100	13.8		
#200	7.9		

* (no specification provided)

Material Description

SAND W/SILT AND GRAVEL, fine to medium grained, brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 14.5733 D_{85}= 5.0489 D_{60}= 0.4908
D_{50}= 0.3724 D_{30}= 0.2365 D_{15}= 0.1572
D_{10}= 0.1040 C_u= 4.72 C_c= 1.10

Classification

USCS= SP-SM AASHTO= A-3

Remarks

Munsell Color Code: 10YR 5/3
Location: Monitoring Well-1

Source of Sample: Monitoring Wells **Depth:** 14.0'-16.0'
Sample Number: MW1 S7 **Date:** 2/18/2022

Tetra Tech **2679 Continental Drive** **Green Bay, WI 54311**	**Client:** Dane County **Project:** Yahara Hills Geotechnical Investigation **Project No:** **Figure**

Tested By: MAB **Checked By:** JJN

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 Site No. 3	N/A	B-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/18/2022	2/21/2022	HSA 4.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			887.8 Feet MSL	892.3 Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,836 N, 2,169,372 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 ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 14	3 5 12 10	1	Silty sand with gravel (SM), very pale brown (10YR 7/3), coarse to medium to fine grained, moist, medium dense (till)										
			2											
			3											
			4				▼							
			5											
ST	14		6		SM									Shelby tube ST-3 - 5.5-6.67ft
			7											
			8											
2 SS	24 24	14 17 17 18	9	some medium sand, few coarse sand, dense										
			10											
			11											
			12											

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

Signature	Firm	Tel:
Logan Dwyer	Tetra Tech 8413 Excelsior Dr Suite 160 Madison, WI 53714	Fax:

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 B-2 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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
3 SS	24 9	31 31 19 25	13–15	trace coarse sand, trace medium sand, some cobbles, dry, very dense	SM									Driller indicated hard drilling and cobbles present 17-18ft
4 SS	1 1	60	18–19	(Weathered Dolomite bedrock), dolomite fragments, few silt, yellowish brown (10YR 5/4), wet (Galena-Platteville Fm)										
			19–20	See B-2A log.										
1 RC	120 60		23–24	As a result of the poor recovery a second core was performed adjacent to the original borehole at Boring B-2A. Refer to Boring B-2A for detailed bedrock description. Dolomite, highly fractured, near vertical, silty layers present, trace clay layers, light gray (GLEY1 7/N), (Galena-Platteville Fm)										HQ rock core run 1: RQD= 16% (very poor) Recovery 50% FF= Indeterminable due to disaggregated sample
			29–32	Limited recovery - highly fractured, gray (5Y 5/1)										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-2 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	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			33											
			34	End of boring 34 feet (bottom elevation 858.3ft MSL)										

SCS edits (in red) based on review of rock core 8/15/2023.

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B-2

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	___ ___ ___ ___ ___	

Latitude / Longitude (see instructions): 378835.51 N / 2169372.39 W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ SE 1/4	¼ SE 1/4	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☑ E ☐ W

Well Street Address: Yahara Hills Golf Course 6701 US-12, Madison, WI 53718

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
Sample Only	___ ___ ___ ___ ___

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 2/21/2022

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.)
34 ft.	

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
3.75 in.	

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

If yes, to what depth (feet)?	Depth to Water (feet)
	4.52

2. Facility / Owner Information

Facility Name: Dane County Dept of Waste and Renewables

Facility ID (FID or PWS): 113450480

License/Permit/Monitoring #: N/A

Original Well Owner:

Present Well Owner:

Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

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	34	525 lbs	

6. Comments

Boring B-2: 8" hole to bedrock at 24ft, then 3.75" to 34 ft in bedrock - filled with chips to surface

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Scott Klumb - SES Madison		2/21/2022

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	Logan Dwyer	4/14/2022

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 Site No. 3	N/A	B-2A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/28/2022	3/1/2022	HSA 4.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			886.3 Feet MSL	892.3 Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,839 N, 2,169,372 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 ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind drill to 19 feet - see boring log "B-2" for soil descriptions	SM		▼							
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											

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

Signature Lucas Spocketer Firm Tetra Tech
8413 Excelsior Dr Suite 160 Madison, WI 53714
Tel:
Fax:

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 B-2A 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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			13	Blind drill to 19 feet - see boring log "B-2" for soil descriptions *(continued)*										
			14											
			15		SM									Weathered bedrock noticed by driller @ 14.5 feet
			16											
			17											
			18	Silty Gravel (GM)										
				(Weathered Dolomite)	GM									
1 RC	84 81		19	Fractured dolomite, light gray (GLEY1 7/N) ~~(Galena-Platteville Fm)~~										HQ rock core run 1: RQD= 75% (good); recovery 96% FF= 3.1
			20	(Prairie du Chien Group, Oneota Formation)										
			21		DL-4									
			22											
			23											
			24	Weathered dolomite, light gray (GLEY1 7/N), interbedded sandy clay (glauconite) ~~(Galena-Platteville Fm)~~	X X									
			25											
2 RC	60 54		26	Highly fractured dolomite, light gray (GLEY1 7/N), some blue green clay interbedding (glauconite), iron concentration at 28 feet with pyrite ~~(Galena-Platteville Fm)~~	X X									HQ rock core run 2: RQD= 37% (poor); recovery 90% FF= Indeterminable due to disaggregated sample
			27											
			28											
			29											
			30											
3 RC	60 49		31		X X									
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-2A Use only as an attachment to Form 4400-122. Page 3 of 3

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: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			33	Highly fractured gray dolomite, light gray (GLEY1 7/N), interbedded with blue-green limestone (vertical fractures) ~~(Galena-Platteville Fm)~~ *(continued)*	DL4									HQ rock core run 3: RQD= 55% (fair); recovery 82% FF= 4.2
			34											
			35											
			36	Highly fractured dolomite, light gray (10YR 7/1) ~~(Galena-Platteville Fm)~~	X	X								
				End of boring 36 feet (bottom elevation 856.3ft MSL)										

SCS edits (in red) based on review of rock core 1/24/2023.

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B-2A

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	___ ___ ___ ___ ___	

Latitude / Longitude (see instructions): 378835.51 N, 2169372.39 W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼ SE 1/4	¼ SE 1/4	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☑ E ☐ W

Well Street Address: Yahara Hills Golf Course 6701 US-12, Madison, WI 53718

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
Sample Only	___ ___ ___ ___ ___

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 2/28/2022

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.)
36 ft.	

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
3.5 in.	

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

If yes, to what depth (feet)?	Depth to Water (feet)
	6 ft

2. Facility / Owner Information

Facility Name: Dane County Dept of Waste and Renewables

Facility ID (FID or PWS): 113450480

License/Permit/Monitoring #: N/A

Original Well Owner:

Present Well Owner:

Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

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	36	550 lbs	

6. Comments

Boring B-2A: Poured bentonite chips after augers were pulled

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Scott Klumb - SES Madison		3/1/2022

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	Lucas Specketer	4/14/2022

DNR Use Only

Date Received	Noted By

Comments:

MW-2

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 Site No. 3	N/A	MW-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/21/2022	2/21/2022	HSA 4.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WA433	102	MW-2	886.5 Feet MSL	892.3 Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,836 N, 2,169,374 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 ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1–14	See boring log "B-2" for soil descriptions Kh = 1.73E-04 cm/s	SM					15.4	NV	NP	19.7	Lab classified as SM Screen zone bag sample S11 - 5.5-6.67ft from boring B-2
				End of boring 14 feet - well set at 13 feet (borehole bottom elevation 878.3ft MSL)										

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

Signature	Firm	Tel:
Logan Dwyer	Tetra Tech 8413 Excelsior Dr Suite 160 Madison, WI 53714	Fax:

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.

SCS edits (in red) based on review of soil & rock samples 8/12/2023.

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	Local Grid Location of Well: ____ft. ☐ N. ☐ S. ____ft. ☐ E. ☐ W.	Well Name: MW-2
Facility License, Permit or Monitoring No.: N/A	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WA433 / DNR Well Number: 102
Facility ID: 113450480	St. Plane 378,836 ft. N, 2,169,374 ft. E. S/C/N	Date Well Installed: 02/21/2022
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: (Person's Name and Firm): Scott Klumb, Soils and Engineering Services
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 895.18 ft. MSL
B. Well casing, top elevation 895.14 ft. MSL
C. Land surface elevation 892.3 ft. MSL
D. Surface seal, bottom 892.3 ft. MSL or 0.0 ft.

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

13. Sieve analysis attached? ☒ Yes ☐ No

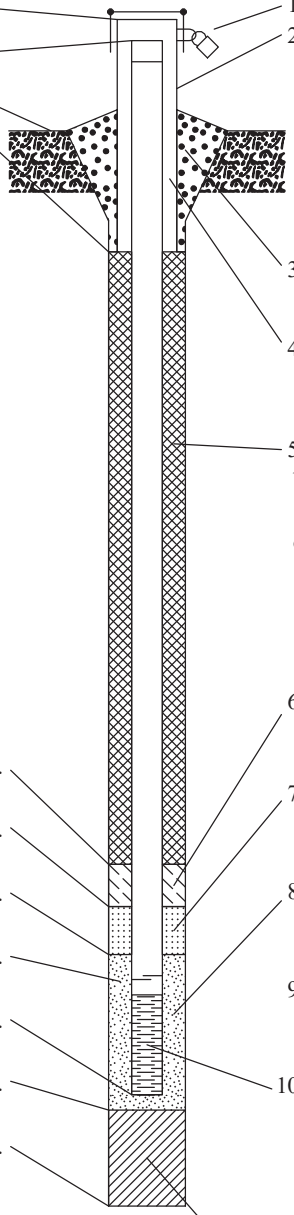
14. Drilling method used: Rotary ☐ 5 0 / Hollow Stem Auger ☒ 4 1 / Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1 Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe

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

E. Bentonite seal, top 891.8 ft. MSL or 0.5 ft.
F. Fine sand, top 889.8 ft. MSL or 2.5 ft.
G. Filter pack, top 889.8 ft. MSL or 2.5 ft.
H. Screen joint, top 889.3 ft. MSL or 3.0 ft.
I. Well bottom 879.3 ft. MSL or 13.0 ft.
J. Filter pack, bottom 878.3 ft. MSL or 14.0 ft.
K. Borehole, bottom 878.3 ft. MSL or 14.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 5.0 ft.
c. Material: Steel ☒ 0 4 / Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☒ 3 0 / Concrete ☐ 0 1 / Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 3 0 / Red Flint #40 Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____% Bentonite . . . Bentonite-cement grout ☐ 5 0
e. 0.41 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 / Tremie pumped ☐ 0 2 / Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 3 2
c. Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 0 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 1.93 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 / Flush threaded PVC schedule 80 ☐ 2 4 / Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 / Continuous slot ☐ 0 1 / Other ☐
b. Manufacturer Hole Products - Johnson
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 / Other ☐

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

Signature: Logan Dwyer
Firm: Tetra Tech, 8413 Excelsior Dr Suite 160 Madison, WI 53714
Tel:
Fax:

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.

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	Well Name
Dane County Landfill Site No. 3	Dane	MW-2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
N/A	13	WA433	102

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

2. Well development method:

surged with bailer and bailed	☒	4 1
surged with bailer and pumped	☐	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed, and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
other _____	☐	

3. Time spent developing well 150 min.

4. Depth of well (from top of well casing) 15.8 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 5.8 gal.

7. Volume of water removed from well 11.0 gal.

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

9. Source of water added _____

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.	8.63 ft.	14.80 ft.
Date	b.	2/23/2022	2/24/2022
Time	c.	08:45 ☒ a.m. ☐ p.m.	11:45 ☒ a.m. ☐ p.m.
12. Sediment in well bottom		0.0 inches	0.0 inches
13. Water clarity		Clear ☐ 1 0 Turbid ☒ 1 5 (Describe) Tan	Clear ☐ 2 0 Turbid ☒ 2 5 (Describe) Slight, tan

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

14. Total suspended solids	mg/l	304.0	mg/l
15. COD	mg/l	17.1	mg/l

16. Well developed by: Person's Name and Firm
Jeff Prior
Soils & Engineering Services

17. Additional comments on development:
Purged dry on 2/23 twice (4 gals @ 14:25 and 1 gal @ 15:00), purged dry on 2/24 twice (4 gals @ 8:45 and 2 gals @ 10:25)

Facility Address or Owner/Responsible Party Address

Name: Robert Regan

Firm: Dane County Dept of Waste & Renewables

Street: 7102 US-12

City/State/Zip: Madison, Wisconsin 53718

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

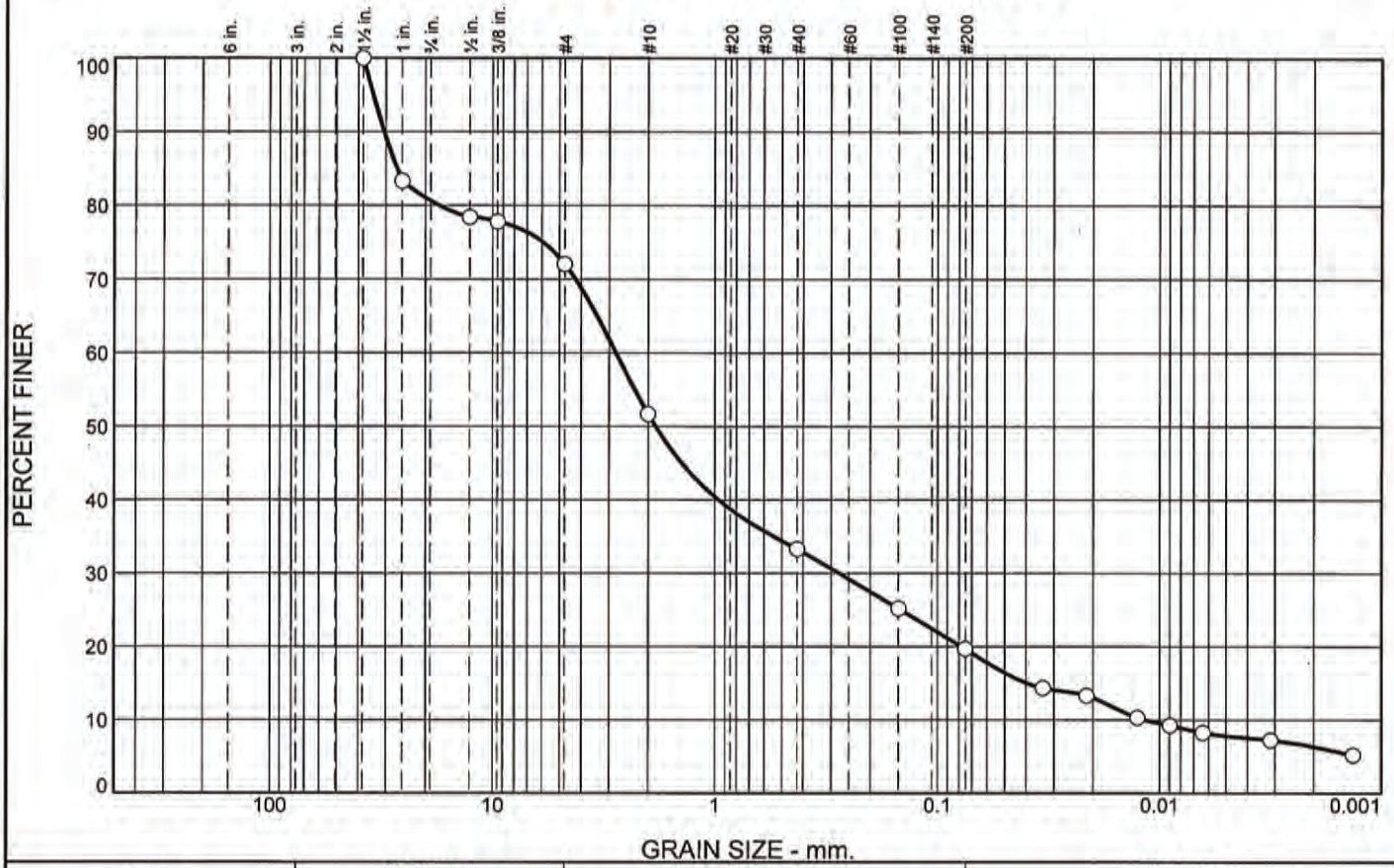
Signature: Logan Dwyer

Print Name: Logan Dwyer

Firm: Tetra Tech

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	19.3	8.6	20.4	18.4	13.6	11.9	7.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0		
1.0	83.3		
0.5	78.4		
0.375	77.8		
#4	72.1		
#10	51.7		
#40	33.3		
#100	25.2		
#200	19.7		

* (no specification provided)

Material Description

SILTY SAND W/GRAVEL, coarse to medium to fine grained, very pale brown

Atterberg Limits

PL= 12 LL= 11 PI= NP

Coefficients

D_{90}= 30.6373 D_{85}= 26.8391 D_{60}= 2.8011
D_{50}= 1.8527 D_{30}= 0.2744 D_{15}= 0.0395
D_{10}= 0.0117 C_u= 239.52 C_c= 2.30

Classification

USCS= SM AASHTO= A-1-b

Remarks

Munsell Color Code: 10YR 7/3
Location: Monitoring Well-2

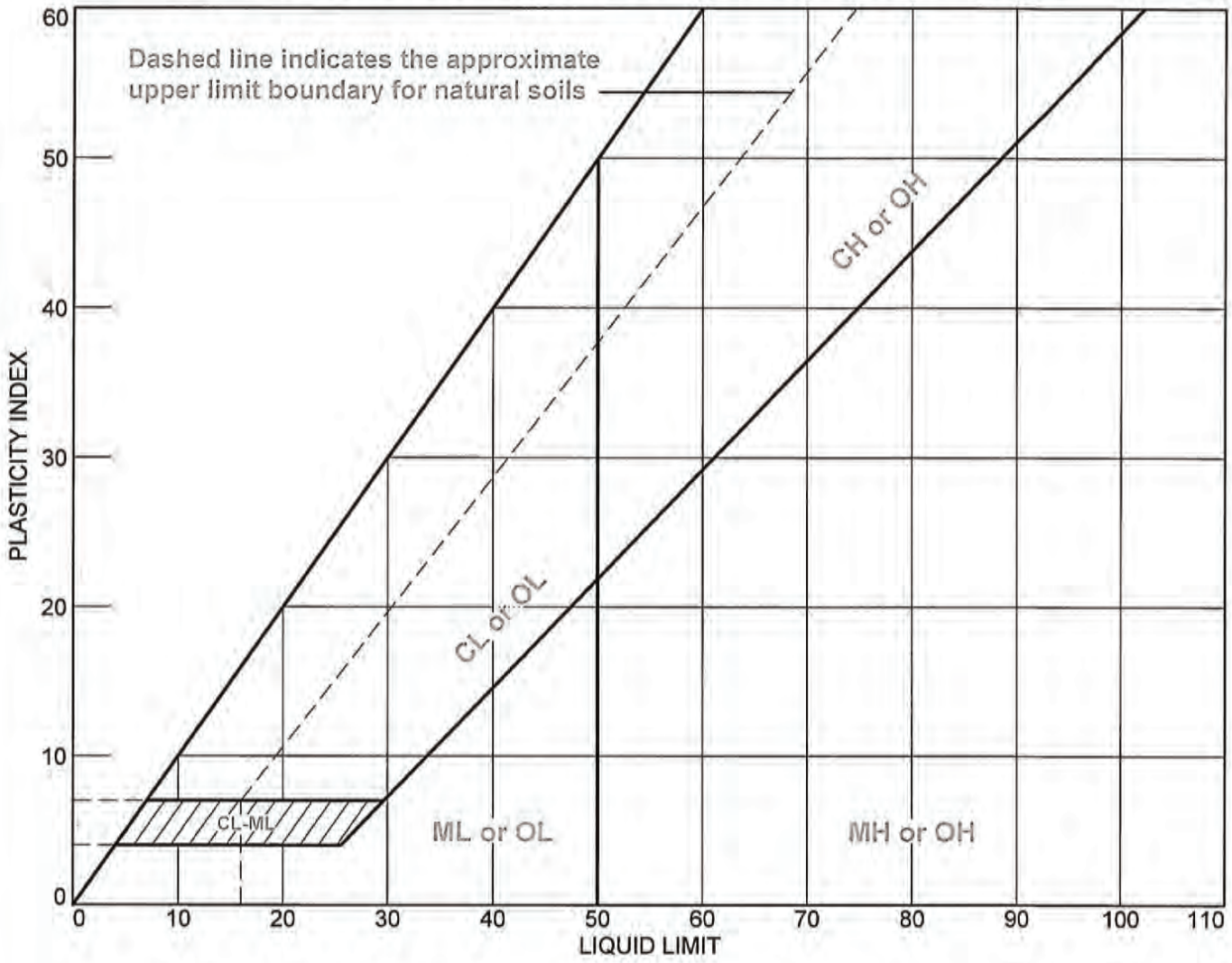
Source of Sample: Monitoring Wells **Depth:** 5'6"-6'8"
Sample Number: MW2 S11 **Date:** 2/18/2022

Tetra Tech
2679 Continental Drive
Green Bay, WI 54311

Client: Dane County
Project: Yahara Hills Geotechnical Investigation
Project No: **Figure**

Tested By: MAB **Checked By:** JJN

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Monitoring Wells	MW2 S11	5'6"-6'8"	15.4	12	11	NP	SM

Tetra Tech
2679 Continental Drive
Green Bay, WI 54311

Client: Dane County
Project: Yahara Hills Geotechnical Investigation
Project No.: **Figure**

Tested By: MAB **Checked By:** JJN

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 ☐

(Not on landfill site.)

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dane County Landfill Site No. 3	N/A	B-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/16/2022	2/16/2022	HSA 2.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			875.0 Feet MSL	895.9 Feet MSL	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,225 N, 2,166,911 E S/C/N
SE 1/4 of SW 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	24 21	7 10 11 12	1–4	Silty sand (SM), trace angular gravel, yellowish red (5YR 4/6), dry, medium dense (till)	SM									
2 SS	24 24	14 12 12 12	8–9	few coarse sand, few angular gravel										

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

Signature	Firm	Tel:
Logan Dwyer	Tetra Tech 8413 Excelsior Dr Suite 160 Madison, WI 53714	Fax:

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 B-3 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	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			13	Silty sand (SM), trace angular gravel, yellowish red (5YR 4/6), dry, medium dense (till) *(continued)*										
3 SS	24 24	5 6 8 8	14	few clay, moist										Moist soil noticed at 13.5 feet
			15											
			16											
			17											
4 SS	24 22	7 7 10 11	18	fine to medium grained, reddish brown (5YR 5/4)	SM					10.4	NV	NP	26.4	Lab classified as SM
			19											
			20											
			21				▼							
			22											
5 SS	24 24	10 17 17 20	23											
			24	Sandy lean clay (CL), little angular gravel, yellowish brown to dark brown (10YR 5/4 to 3/3), medium-plastic, hard, moist ~~(glacio-lacustrine)~~ (Paleosol)	CL				4	10	25	13	59.2	Lab classified as CL
			25											
			26											
			27											
6 SS	24 16 24	7 9 10 13	28	little silt, wet, stiff					2	8.6	NV	NP	31.4	Bag sample S10 - 28-30ft from boring MW-3 (SM)
			29	Silty sand with gravel (SM), light brown (7.5YR 5/4), fine grained, angular gravel, wet, medium dense (outwash)										
			30	SS6A (28.4 - 30') Silty Gravel/Silty Sand, Lt. gray (5YR 7/1) & pink gray (5YR 6/2, angular fine gravel & coarse sand with silt & clay) (Tonti Member)	GM/ SM									
			31											
			32											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-3 Use only as an attachment to Form 4400-122. Page 3 of 3

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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			33	(SP-SM)	SM									
7 SS	9 9	72 28	33	Poorly graded fine sand ~~(SP)~~, white (GLEY1 8/N), wet, very dense ~~(outwash)~~										
			34	Poorly graded sand w/silt (SP-SM) Lt. gray, streaked with pale green (5G 6/2), rounded & angular, mostly quartz sand, fine, dense, cohesive, v. poorly cemented (sandstone) (Tonti Member)										
			35		~~SP~~ SM SS2									
			36											
			37	End of boring 37 feet - bedrock - split spoon refusal (bottom elevation 858.9ft MSL)										

SCS edits (in red) based on review of soil and rock samples 8/20/2023.

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B-3

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	___ ___ ___ ___ ___	

Latitude / Longitude (see instructions)	Format Code	Method Code
378224.92 N	☐ DD	☐ GPS008
2166911.22 W	☐ DDM	☐ SCR002 ☐ OTH001

¼ / ¼ SE 1/4	¼ SW 1/4	Section	Township	Range
or Gov't Lot #		25	7 N	10 ☑ E ☐ W

Well Street Address: Yahara Hills Golf Course 6701 US-12, Madison, WI 53718

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
Sample Only	___ ___ ___ ___ ___

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☑ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 2/16/2022

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.)
37 ft.	

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
6 in.	

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

If yes, to what depth (feet)?	Depth to Water (feet)
	20.85 ft.

2. Facility / Owner Information

Facility Name: Dane County Dept of Waste and Renewables

Facility ID (FID or PWS): 113450480

License/Permit/Monitoring #: N/A

Original Well Owner:

Present Well Owner:

Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

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	19	175 lbs	
Time release coated 3/8" bentonite chips	19	37	4 buckets - 160 lbs	

6. Comments

Boring B-3

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Elliot Patterson - SES Madison		2/16/2022

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

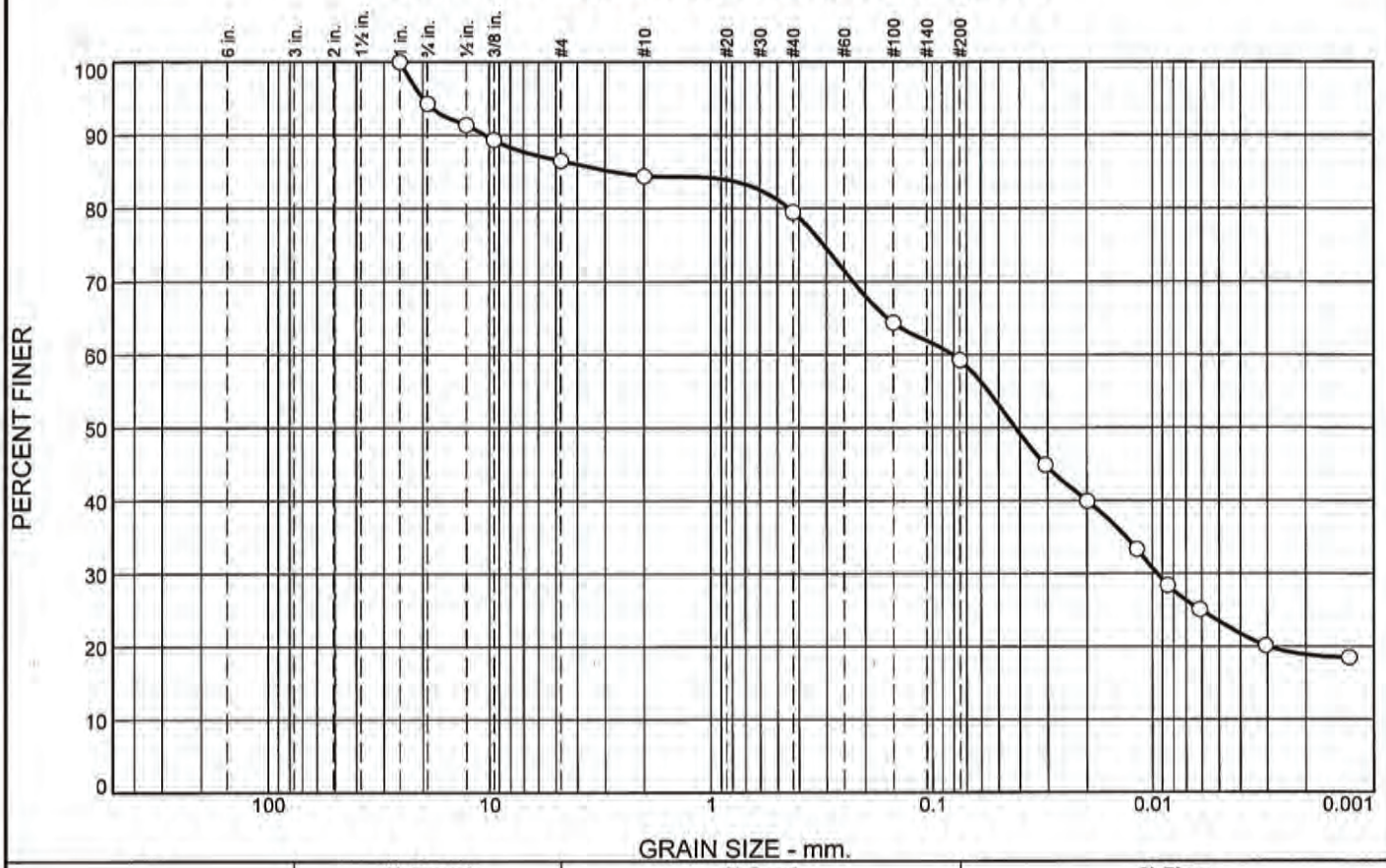
City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Madison	WI	53713	Logan Dwyer	4/14/2022

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	5.7	7.8	2.1	4.9	20.3	35.8	23.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.0	100.0		
0.75	94.3		
0.5	91.4		
0.375	89.4		
#4	86.5		
#10	84.4		
#40	79.5		
#100	64.4		
#200	59.2		

* (no specification provided)

Material Description

SANDY LEAN CLAY, a little gravel, yellowish brown to dark brown

Atterberg Limits

PL= 12 LL= 25 PI= 13

Coefficients

D_{90}= 10.4072 D_{85}= 2.7546 D_{60}= 0.0809
D_{50}= 0.0420 D_{30}= 0.0095 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(4)

Remarks

Munsell Color Code: 10YR 5/4 to 3/3
Location: Boring-3

Source of Sample: Borings **Depth:** 23.5'-25.0'
Sample Number: B3 S5

Date: 2/16/2022

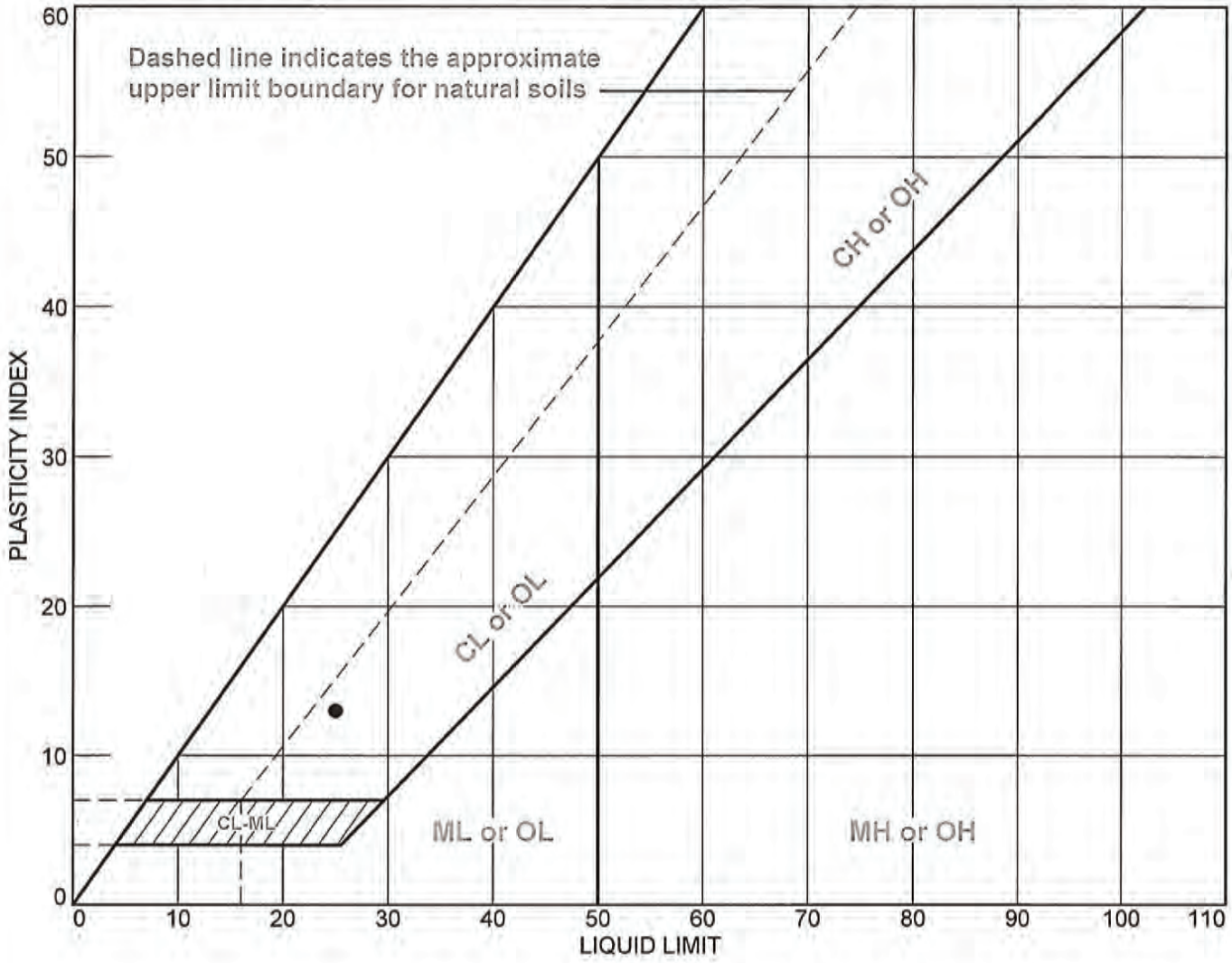
Tetra Tech
2679 Continental Drive
Green Bay, WI 54311

Client: Dane County
Project: Yahara Hills Geotechnical Investigation

Project No: **Figure**

Tested By: MAB **Checked By:** JJN

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Borings	B3 S5	23.5'-25.0'	10.0	12	25	13	CL

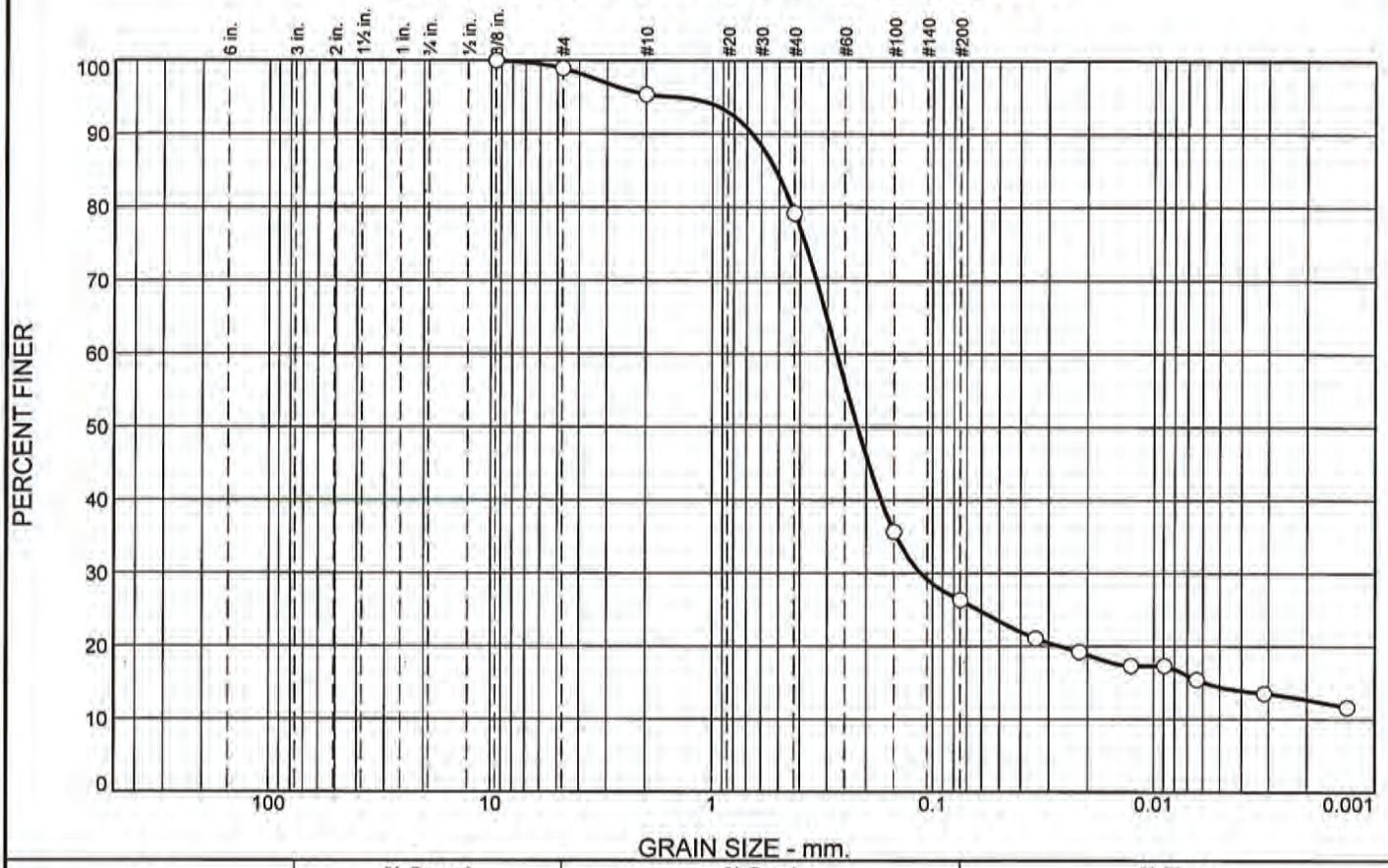
Tetra Tech
2679 Continental Drive
Green Bay, WI 54311

Client: Dane County
Project: Yahara Hills Geotechnical Investigation

Project No.: **Figure**

Tested By: MAB **Checked By:** JJN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.1	3.5	16.2	52.8	12.0	14.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375	100.0		
#4	98.9		
#10	95.4		
#40	79.2		
#100	35.7		
#200	26.4		

* (no specification provided)

Material Description

SILTY SAND, fine to medium grained, reddish brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.6578 D_{85}= 0.5154 D_{60}= 0.2717
D_{50}= 0.2190 D_{30}= 0.1134 D_{15}= 0.0059
D_{10}= C_u= C_c=

Classification

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

Remarks

Munsell Color Code: 5YR 5/4
Location: Boring-3

Source of Sample: Borings **Depth:** 18.0'-20.0'
Sample Number: B3 S12

Date: 2/16/2022

Tetra Tech
2679 Continental Drive
Green Bay, WI 54311

Client: Dane County
Project: Yahara Hills Geotechnical Investigation

Project No: **Figure**

Tested By: MAB **Checked By:** JJN

MW-3

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 Site No. 3	N/A	MW-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/17/2022	2/17/2022	HSA 4.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WA432	103	MW-3	884.2 Feet MSL	896.0 Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 378,218 N, 2,166,911 E S/C/N
SE 1/4 of SW 1/4 of Section 25, T 7 N, R 10 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1.5 3.0 4.5 6.0 7.5 9.0 10.5 12.0 13.5 15.0 16.5 18.0 19.5	See boring log "B-3" for soil descriptions Kh = 1.57E-03 cm/s	SM									

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

Signature	Firm	Tel:
Logan Dwyer	Tetra Tech 8413 Excelsior Dr Suite 160 Madison, WI 53714	Fax:

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-3 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	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			21.0	See boring log "B-3" for soil descriptions *(continued)*	SM									
			22.5											
			24.0											
			25.5		CL									
			27.0											
			28.5		SM					8.6	NV	NP	31.4	Lab classified as SM Bag sample S10 - 28-30ft
			30.0	End of boirng 30 feet - well set at 28 feet (borehole bottom 866ft MSL)										

SCS edits (in red) based on review of soil & rock samples 8/12/2023.

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	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-3
Facility License, Permit or Monitoring No.: N/A	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WA432 / DNR Well Number: 103
Facility ID: 113450480	St. Plane 378,218 ft. N, 2,166,911 ft. E. S/C/N	Date Well Installed: 02/17/2022
Type of Well: Well Code 11/mw	Section Location of Waste/Source: SE 1/4 of SW 1/4 of Sec. 25, T. 7 N, R. 10 ☒ E ☐ W	Well Installed By: (Person's Name and Firm): Scott Klumb, Soils and Engineering Services
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 898.68 ft. MSL
B. Well casing, top elevation 898.64 ft. MSL
C. Land surface elevation 896.0 ft. MSL
D. Surface seal, bottom 896.0 ft. MSL or 0.0 ft.

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

13. Sieve analysis attached? ☒ Yes ☐ No

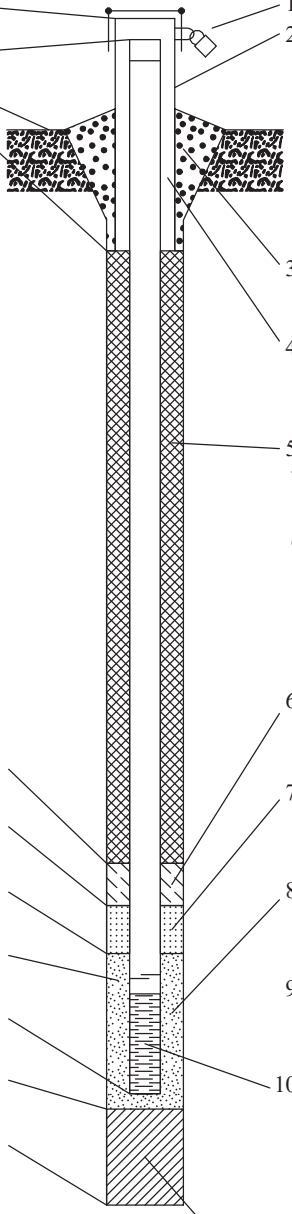
14. Drilling method used: Rotary ☐ 5 0 / Hollow Stem Auger ☒ 4 1 / Other ☐ ____

15. Drilling fluid used: Water ☐ 0 2 / Air ☐ 0 1 / Drilling Mud ☐ 0 3 / None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

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

E. Bentonite seal, top 895.5 ft. MSL or 0.5 ft.
F. Fine sand, top 881.0 ft. MSL or 15.0 ft.
G. Filter pack, top 879.8 ft. MSL or 16.2 ft.
H. Screen joint, top 878.0 ft. MSL or 18.0 ft.
I. Well bottom 868.0 ft. MSL or 28.0 ft.
J. Filter pack, bottom 866.0 ft. MSL or 30.0 ft.
K. Borehole, bottom 866.0 ft. MSL or 30.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 7.0 ft.
c. Material: Steel ☒ 0 4 / Other ☐ ____
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____
3. Surface seal: Bentonite ☒ 3 0 / Concrete ☐ 0 1 / Other ☐ ____
4. Material between well casing and protective pipe: Bentonite ☐ 3 0 / Red Flint #40 / Other ☒ ____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. 2.48 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 / Tremie pumped ☐ 0 2 / Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 3 2
c. ____ Other ☐ ____
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 0.2 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 2.35 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 / Flush threaded PVC schedule 80 ☐ 2 4 / Other ☐ ____
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 / Continuous slot ☐ 0 1 / Other ☐ ____
b. Manufacturer Hole Products - Johnson
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 / Other ☐ ____

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

Signature: Logan Dwyer
Firm: Tetra Tech, 8413 Excelsior Dr Suite 160 Madison, WI 53714
Tel:
Fax:

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.

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	Well Name
Dane County Landfill Site No. 3	Dane	MW-3

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
N/A	13	WA432	103

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

2. Well development method:

surged with bailer and bailed	☐	4 1
surged with bailer and pumped	☒	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed, and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
other _____	☐	

3. Time spent developing well 60 min.

4. Depth of well (from top of well casing) 30.6 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 8.8 gal.

7. Volume of water removed from well 145.0 gal.

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

9. Source of water added _____

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.	14.41 ft.	14.95 ft.
Date	b.	2/23/2022	2/23/2022
Time	c.	09:30 ☒ a.m. ☐ p.m.	12:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom		0.0 inches	0.0 inches
13. Water clarity		Clear ☐ 1 0 Turbid ☒ 1 5 (Describe) Tan	Clear ☒ 2 0 Turbid ☐ 2 5 (Describe) Clear

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

14. Total suspended solids	mg/l	76.2	mg/l
15. COD	mg/l		mg/l

16. Well developed by: Person's Name and Firm
Jeff Prior
Soils & Engineering Services

17. Additional comments on development:
Purged 10 gallons with bailer, then pumped @ 3 gal/min from 10:00AM-10:45AM

Facility Address or Owner/Responsible Party Address

Name: Robert Regan

Firm: Dane County Dept of Waste & Renewables

Street: 7102 US-12

City/State/Zip: Madison, Wisconsin 53718

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

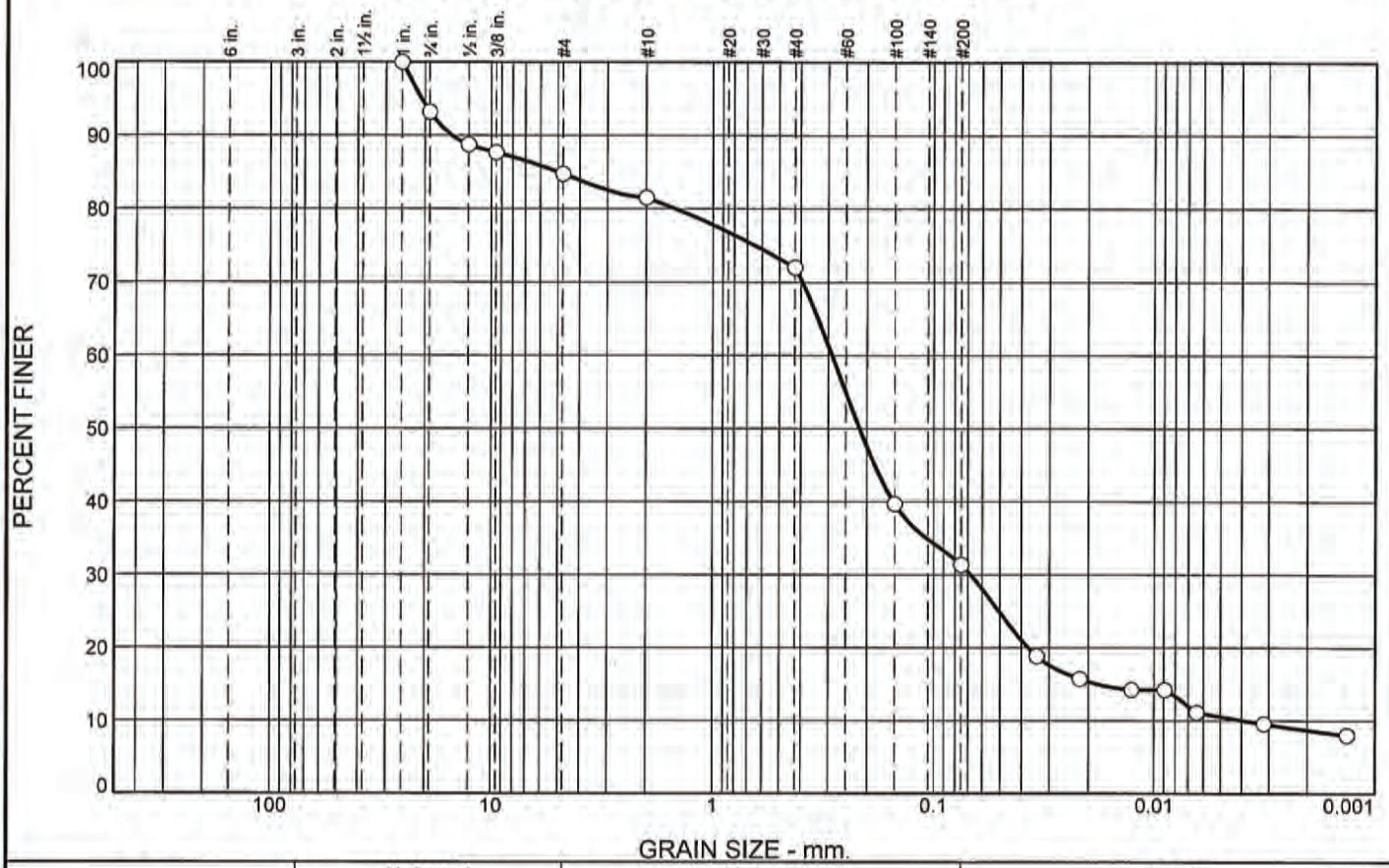
Signature: Logan Dwyer

Print Name: Logan Dwyer

Firm: Tetra Tech

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	6.8	8.4	3.3	9.5	40.6	20.9	10.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.0	100.0		
0.75	93.2		
0.5	88.8		
0.375	87.7		
#4	84.8		
#10	81.5		
#40	72.0		
#100	39.7		
#200	31.4		

* (no specification provided)

Material Description

SILTY SAND W/GRAVEL, fine grained, light brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 15.0773 D_{85}= 4.9756 D_{60}= 0.2891
D_{50}= 0.2167 D_{30}= 0.0679 D_{15}= 0.0181
D_{10}= 0.0039 C_u= 73.89 C_c= 4.08

Classification

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

Remarks

Munsell Color Code: 7.5YR 5/4
Location: Monitoring Well-3

Source of Sample: Monitoring Wells **Depth:** 28.0'-30.0'
Sample Number: MW3 S10 **Date:** 2/17/2022

Tetra Tech **2679 Continental Drive** **Green Bay, WI 54311**	**Client:** Dane County **Project:** Yahara Hills Geotechnical Investigation **Project No:** **Figure**

Tested By: MAB **Checked By:** JJN

MW-4

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 Site No. 3	N/A	MW-4

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Klumb Soils and Engineering Services	2/16/2022	2/17/2022	HSA 4.25 ID

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
WA431	104	MW-4	895.7 Feet MSL	911.7 Feet MSL	8.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 377,202 N, 2,168,283 E S/C/N
NW 1/4 of NE 1/4 of Section 36, T 7 N, R 10 E
Lat ___ ° ___ ' ___ "
Long ___ ° ___ ' ___ "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
113450480	Dane	13	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: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Lean clay with sand (CL), little sand, few silt, trace subangular gravel, brown (7.5YR 4/3), medium-plastic, moist, stiff ~~(glacio-lacustrine)~~ (Loess)	CL									
			2											
1 SS	24 14	3 3 4 5	3	Silty sand (SM) (Till)					2.75					
			4											
			5											
			6		SM ~~CL~~									
			7											
2 SS	24 24	2 2 2 2	8	~~medium stiff~~ Silty sand (SM) (Till)					1					
			9											
			10		SM									
			11											
			12											

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

Signature	Firm	Tel:
Logan Dwyer	Tetra Tech 8413 Excelsior Dr Suite 160 Madison, WI 53714	Fax:

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-4 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	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			13		CL									
3 SS	7 7	83 17	13	Highly Weathered Dolomite, fine grained, pale yellow (2.5YR 8/3), angular rock fragments, dry, very dense										
			14											
			15											
			16											
			17	Kh = 4.38E-02 cm/s	DOL									
4 SS	5 5	100	18	glauconite pockets, brownish yellow (10YR 6/6)										Water noticed in samples @ 18 feet
			19											
			20											
			21	Dolomite rock fragments, brownish yellow (10YR 6/6)	X X					8.6		NP	16.4	Lab classified as GM Screen zone MW-4 - Bag sample S6 - 21-23ft
			22											
5 SS	2 2	60	23											
			24											
			25											
			26											
			27											
6 SS	1 1	60	28	Highly Weathered Rock, very pale brown (10YR 7/3), medium to coarse to fine grained sand, some silt, wet, very dense	X X					9.5		NP	24	Lab classified as SM Bag sample S8 - 29-31ft (from auger flights)
			29											
			30											
			31	End of boring 31 feet - well set at 28ft (borehole bottom 880.7ft MSL)	X X									

SCS edits (in red) based on review of soil & rock samples 8/12/2023.

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	Local Grid Location of Well: ____ft. ☐ N. ☐ S. ____ft. ☐ E. ☐ W.	Well Name: MW-4
Facility License, Permit or Monitoring No.: N/A	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: WA431 / DNR Well Number: 104
Facility ID: 113450480	St. Plane 377,202 ft. N, 2,168,283 ft. E. S/C/N	Date Well Installed: 02/17/2022
Type of Well: Well Code 11/mw	Section Location of Waste/Source: NW 1/4 of NE 1/4 of Sec. 36, T. 7 N, R. 10 ☒ E ☐ W	Well Installed By: (Person's Name and Firm): Scott Klumb, Soils and Engineering Services
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 914.37 ft. MSL
B. Well casing, top elevation 914.34 ft. MSL
C. Land surface elevation 911.7 ft. MSL
D. Surface seal, bottom 911.7 ft. MSL or 0.0 ft.

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

13. Sieve analysis attached? ☒ Yes ☐ No

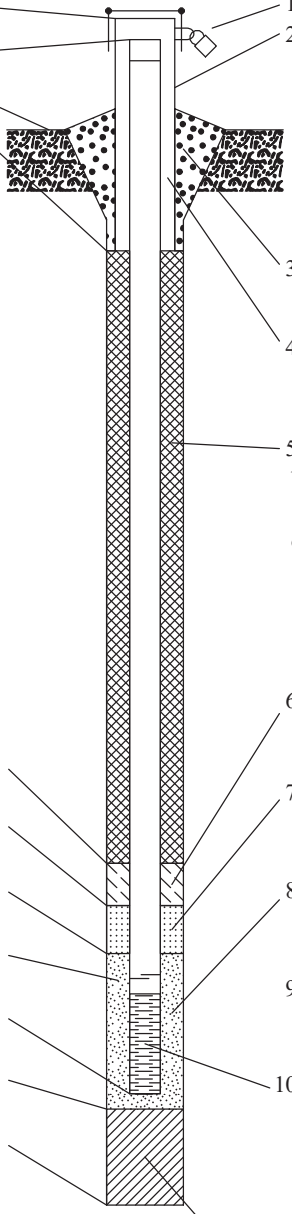
14. Drilling method used: Rotary ☐ 5 0 / Hollow Stem Auger ☒ 4 1 / Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1 Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No
Describe

17. Source of water (attach analysis, if required): City of Madison

E. Bentonite seal, top 911.2 ft. MSL or 0.5 ft.
F. Fine sand, top 896.7 ft. MSL or 15.0 ft.
G. Filter pack, top 895.7 ft. MSL or 16.0 ft.
H. Screen joint, top 893.7 ft. MSL or 18.0 ft.
I. Well bottom 883.7 ft. MSL or 28.0 ft.
J. Filter pack, bottom 880.7 ft. MSL or 31.0 ft.
K. Borehole, bottom 880.7 ft. MSL or 31.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 7.0 ft.
c. Material: Steel ☒ 0 4 / Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☒ 3 0 / Concrete ☐ 0 1 / Other ☐
4. Material between well casing and protective pipe: Bentonite ☐ 3 0 / Red Flint #40 / Other ☒
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____% Bentonite . . . Bentonite-cement grout ☐ 5 0
e. 2.48 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 / Tremie pumped ☐ 0 2 / Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 3 2
c. Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. Red Flint #15
b. Volume added 0.17 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 2.58 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 / Flush threaded PVC schedule 80 ☐ 2 4 / Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 / Continuous slot ☐ 0 1 / Other ☐
b. Manufacturer Hole Products - Johnson
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 / Other ☐

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

Signature: Logan Dwyer
Firm: Tetra Tech, 8413 Excelsior Dr Suite 160 Madison, WI 53714
Tel:
Fax:

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.

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	Well Name
Dane County Landfill Site No. 3	Dane	MW-4

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
N/A	13	WA431	104

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

2. Well development method:

surged with bailer and bailed	☐	4 1
surged with bailer and pumped	☒	6 1
surged with block and bailed	☐	4 2
surged with block and pumped	☐	6 2
surged with block, bailed, and pumped	☐	7 0
compressed air	☐	2 0
bailed only	☐	1 0
pumped only	☐	5 1
pumped slowly	☐	5 0
other _____	☐	

3. Time spent developing well 100 min.

4. Depth of well (from top of well casing) 30.6 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 8.0 gal.

7. Volume of water removed from well 147.5 gal.

8. Volume of water added (if any) 125.0 gal.

9. Source of water added City of Madison

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.	18.63 ft.	18.82 ft.
Date	b.	2/23/2022	2/23/2022
Time	c.	11:25 ☒ a.m. ☐ p.m.	01:55 ☐ a.m. ☒ p.m.
12. Sediment in well bottom		0.0 inches	0.0 inches
13. Water clarity		Clear ☐ 1 0 Turbid ☒ 1 5 (Describe) Tan	Clear ☒ 2 0 Turbid ☐ 2 5 (Describe) Clear

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

14. Total suspended solids	mg/l	620.0	mg/l
15. COD	mg/l	19.3	mg/l

16. Well developed by: Person's Name and Firm
Jeff Prior
Soils & Engineering Services

17. Additional comments on development:
Purged 10 gallons with bailer, then pumped @ 2.5 gal/min 13:00-13:55

Facility Address or Owner/Responsible Party Address

Name: Robert Regan

Firm: Dane County Dept of Waste & Renewables

Street: 7102 US-12

City/State/Zip: Madison, Wisconsin 53718

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

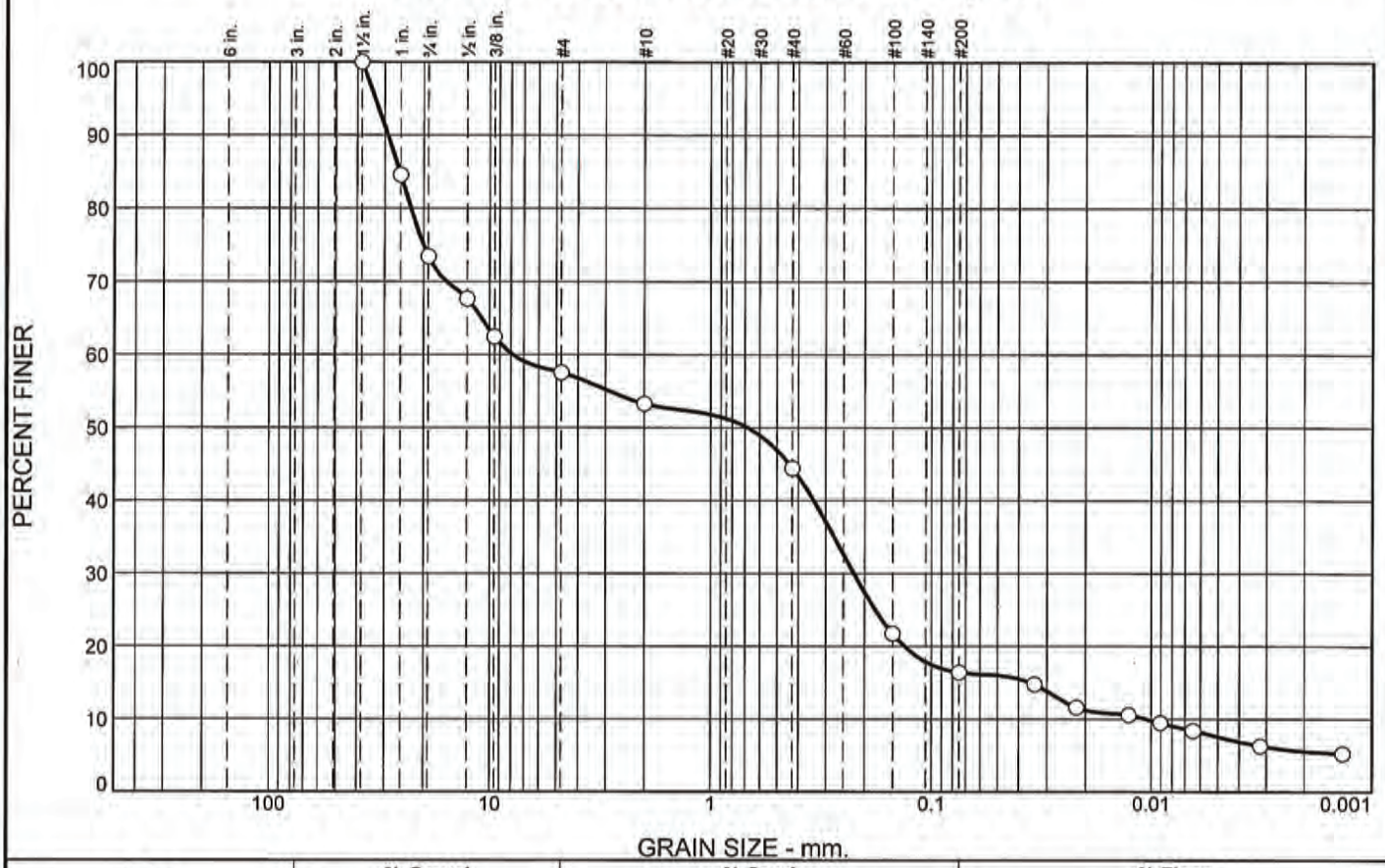
Signature: Logan Dwyer

Print Name: Logan Dwyer

Firm: Tetra Tech

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	26.6	15.9	4.2	8.9	28.0	8.8	7.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0		
1.0	84.6		
0.75	73.4		
0.5	67.7		
0.375	62.4		
#4	57.5		
#10	53.3		
#40	44.4		
#100	21.8		
#200	16.4		

* (no specification provided)

Material Description

SILTY SAND W/GRAVEL, fine grained, reddish brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 29.0492 D_{85}= 25.6505 D_{60}= 7.8930
D_{50}= 0.6774 D_{30}= 0.2240 D_{15}= 0.0355
D_{10}= 0.0105 C_u= 749.91 C_c= 0.60

Classification

USCS= GM AASHTO= A-1-b

Remarks

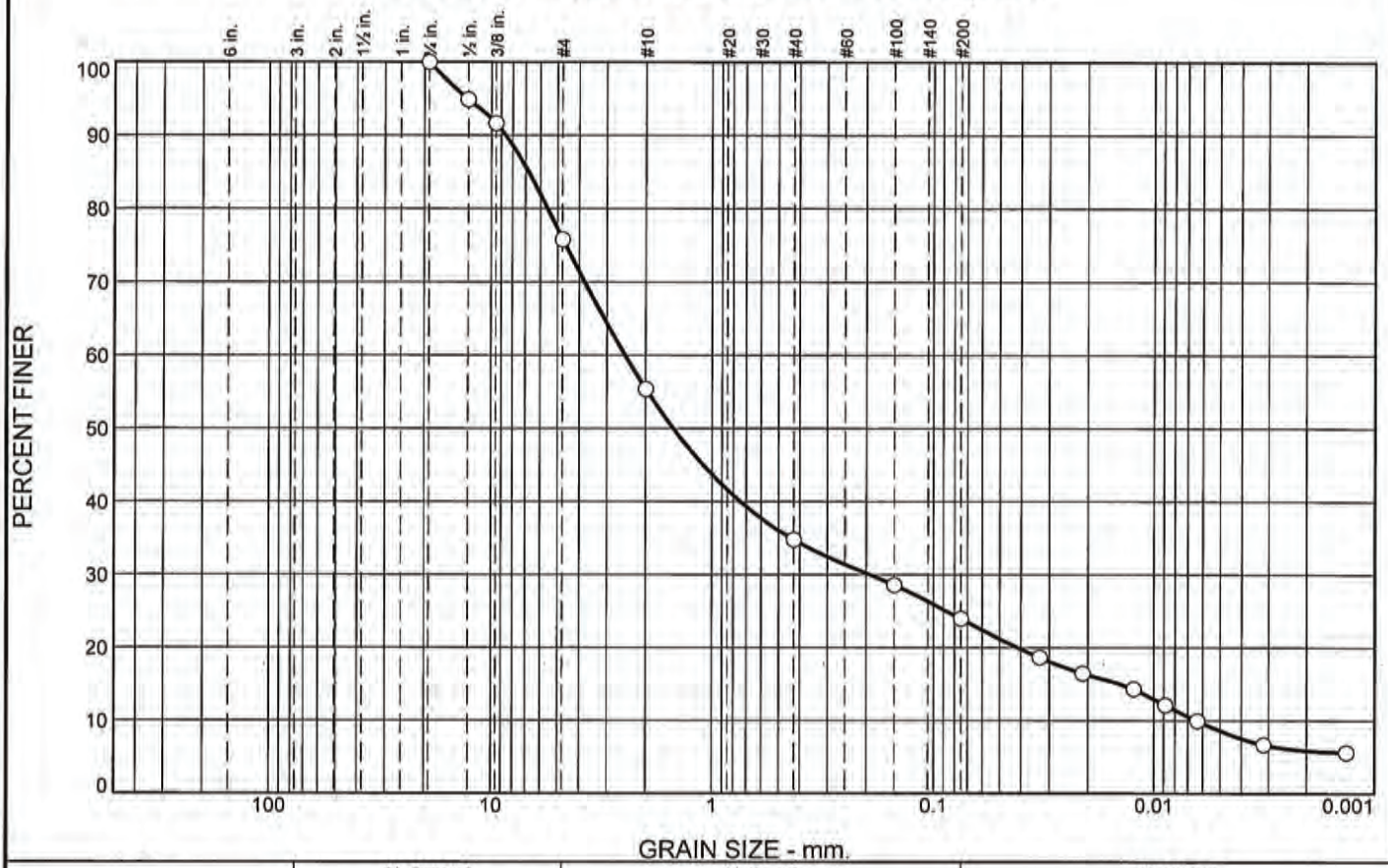
Munsell Color Code: 5YR 5/4
Location: Monitoring Well-4

Source of Sample: Monitoring Wells **Depth:** 21.0'-23.0'
Sample Number: MW4 S6 **Date:** 2/16/2022

Tetra Tech **2679 Continental Drive** **Green Bay, WI 54311**	**Client:** Dane County **Project:** Yahara Hills Geotechnical Investigation **Project No:** **Figure**

Tested By: MAB **Checked By:** JJN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	24.2	20.4	20.6	10.8	15.4	8.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75	100.0		
0.5	94.9		
0.375	91.6		
#4	75.8		
#10	55.4		
#40	34.8		
#100	28.6		
#200	24.0		

* (no specification provided)

Material Description

SILTY SAND W/GRAVEL, medium to coarse to fine grained, very pale brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 8.6079 D_{85}= 6.7950 D_{60}= 2.4883
D_{50}= 1.4996 D_{30}= 0.1925 D_{15}= 0.0143
D_{10}= 0.0064 C_u= 389.96 C_c= 2.33

Classification

USCS= SM AASHTO= A-1-b

Remarks

Munsell Color Code: 10YR 7/3
Location: Monotoring Well 4

Source of Sample: Monitoring Wells **Depth:** 29.0'-31.0'
Sample Number: MW4 S8 **Date:** 2/17/2022

Tetra Tech
2679 Continental Drive
Green Bay, WI 54311

Client: Dane County
Project: Yahara Hills Geotechnical Investigation
Project No: **Figure**

Tested By: MAB **Checked By:** JJN