Environmental Consultants
and Contractors

2830 Dairy Drive
Madison, WI 53718-6751

608 224-2830
FAX 608 224-2839
www.scsengineers.com

SCS BT SQUARED

August 29, 2012
File No. 25212211.00

Mr. Gregory Frahm
Director of Economic Development and Planning
Village of DeForest
306 DeForest Street
DeForest, WI 53532

Subject: Preliminary Geotechnical Report
Proposed DeForest Business Park – Phase 2, DeForest, Wisconsin

Dear Mr. Frahm:

As requested, we completed the preliminary geotechnical investigation and report for the proposed business park expansion in accordance with our proposal dated July 25, 2012. We believe the site is suitable for construction of the proposed industrial park development within the limitations described in the report. This report presents preliminary recommendations for the design and construction from a geotechnical viewpoint. Additional soil borings and geotechnical evaluation are recommended as the design locations, elevations, and details of the development become available.

Unless you notify us to the contrary, the soil samples from the geotechnical borings will be discarded after 60 days.

We will contact you in a few days to see that our report has satisfied your needs. In the interim, please feel free to contact us if you have questions.

Sincerely,

Mark R. Huber, PE
Vice President
SCS BT SQUARED

Debra L. Nelson, PE
Senior Geotechnical Engineer
SCS BT SQUARED

DLN/DMH/TLC/MRH

Enclosures: Preliminary Geotechnical Report

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SCS BT SQUARED







Preliminary Geotechnical Report

Proposed DeForest Business Park – Phase 2, DeForest, Wisconsin

Presented to:

Village of DeForest

306 DeForest Street
DeForest, Wisconsin
(608) 846-6751

Presented by:

SCS BT SQUARED
2830 Dairy Drive
Madison, Wisconsin 53718-6751
(608) 224-2830

August 2012
File No. 25212211

Offices Nationwide
www.scsengineers.com

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Figure

Appendices

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1.0 PROJECT DESCRIPTION

The property located on **Figure 1** is being considered for an expansion of the Village of DeForest business park. An area on the order of 86 acres is planned for development. The locations and elevations of buildings, pavements, and utilities have not been determined.

The limitations of this preliminary geotechnical report are discussed in **Appendix A**. The field exploration program and laboratory soil testing performed for this project are described in **Appendix B**.

2.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

In our opinion, based on the 7 preliminary geotechnical borings drilled to a depth of 20 feet below ground surface (bgs), the site appears to be suitable for construction of the proposed business park expansion. Groundwater was encountered in 3 of the borings near elevations 927 to 929 feet above mean sea level (amsl), approximately 12 to 18 feet bgs. No bedrock was encountered in the preliminary borings. In our opinion, the soils encountered in the borings below the topsoil are suitable for reuse as compacted engineered fill if properly graded into uniform thin lifts and moisture conditioned to attain recommended dry density values.

2.1 SITE PREPARATION AND EXCAVATION CONSIDERATIONS

We recommend stripping vegetation and topsoil from the pavement and building areas to a minimum of 5 feet beyond the construction limits. The topsoil thickness ranges from approximately 8 to 17 inches in the preliminary borings. Topsoil is not recommended for reuse as compacted fill below pavement or buildings and should be reserved for landscaping purposes.

In our opinion, the soils encountered in the preliminary borings below the topsoil layer from site cuts can be used as engineered fill. Use of a granular (sand and/or gravel) fill is recommended because it is more easily compacted, particularly during wet weather. Removal of larger cobbles may be required before soil from site cuts can be used as engineered fill. Silt and/or clay fill is more likely to require moisture conditioning, usually by drying, to achieve adequate compaction.

Bedrock was not encountered during drilling of the preliminary borings so bedrock removal is not anticipated during excavation to the maximum exploration depth of 20 feet in the borings.

Groundwater elevations were near 927 to 929 feet amsl in the borings in August 2012. Seepage into excavations extending 1 to 2 feet below groundwater can likely be controlled by pumping from filtered sumps. Installation of well points will likely be required to control seepage into excavations extending more than 1 to 2 feet below groundwater.

We recommend that excavation sidewalls be cut back to provide slopes that conform with the U.S. Occupational Safety and Health Administration (OSHA) requirements. Temporary sheathing and bracing or a trenching shield should be used for utility installation in accordance with OSHA requirements.

2.2 FOUNDATION AND FLOOR SLAB DESIGN

In our opinion, the site generally appears suitable for the use of spread foundations and floor slabs-on-grade. Floor slabs should be established a minimum of 2 feet above groundwater unless waterproofing measures are incorporated in the building design. Floor slabs within 2 feet of groundwater will require an under floor lateral drainage system and installation of water stops at construction joints, as well as an evaluation of hydrostatic uplift resistance. For preliminary planning purposes, we recommend establishing basement floor slabs at elevation 932 feet amsl or above. Prior to the final design of basement floor slabs, we recommend installing groundwater level observation wells to confirm the groundwater elevation.

We recommend placement of a 6-inch-thick layer of clean granular soil below the basement or other floor slabs-on-grade to cutoff the rise of soil capillary moisture and to provide a uniform bearing layer. Clean granular soils include washed crushed stone, washed sand, and concrete fine aggregate. We recommend installation of a 4- to 6-mil-thick vapor barrier over the clean granular soil.

A membrane or other capillary break should also be considered for installation over the top of spread foundations to separate them from the foundation walls or basement walls. The purpose of the capillary break is to prevent the capillary rise of soil moisture through the foundations and up into the building walls, particularly in areas where groundwater may be near the foundation grade.

2.3 RECOMMENDATIONS FOR ADDITIONAL EVALUATION

We recommend supplemental subsurface exploration and geotechnical analysis after the locations, elevations, and additional design details for the proposed business park expansion become available.

When site development gets underway, we recommend construction monitoring by a geotechnical engineer or engineering technician during the following phases:

- Topsoil stripping, and building and pavement subgrade preparation
- Fill placement and compaction
- Foundation excavation

3.0 SITE DESCRIPTION

3.1 SURFACE CHARACTERISTICS

The business park expansion site is located near U.S. Highway 51 as shown on **Figure 1**. The Yahara River is near the western boundary of the site. The topography is rolling with ground surface elevations ranging from approximately 940 to 955 feet amsl at the preliminary boring locations. The site was farm fields planted in corn and hay at the time of drilling in August 2012.

3.2 SUBSURFACE CONDITIONS

The site is overlain with approximately 8 to 17 inches of brown topsoil at the 7 preliminary boring locations. The boring logs are contained in **Appendix C**. The topsoil is underlain by approximately 1.5 to 5.5 feet of medium stiff to hard, mottled brown to gray lean clay. At borings B3 and B7, the lean clay is underlain by a 2-foot-thick layer of very soft to medium stiff, brown silt.

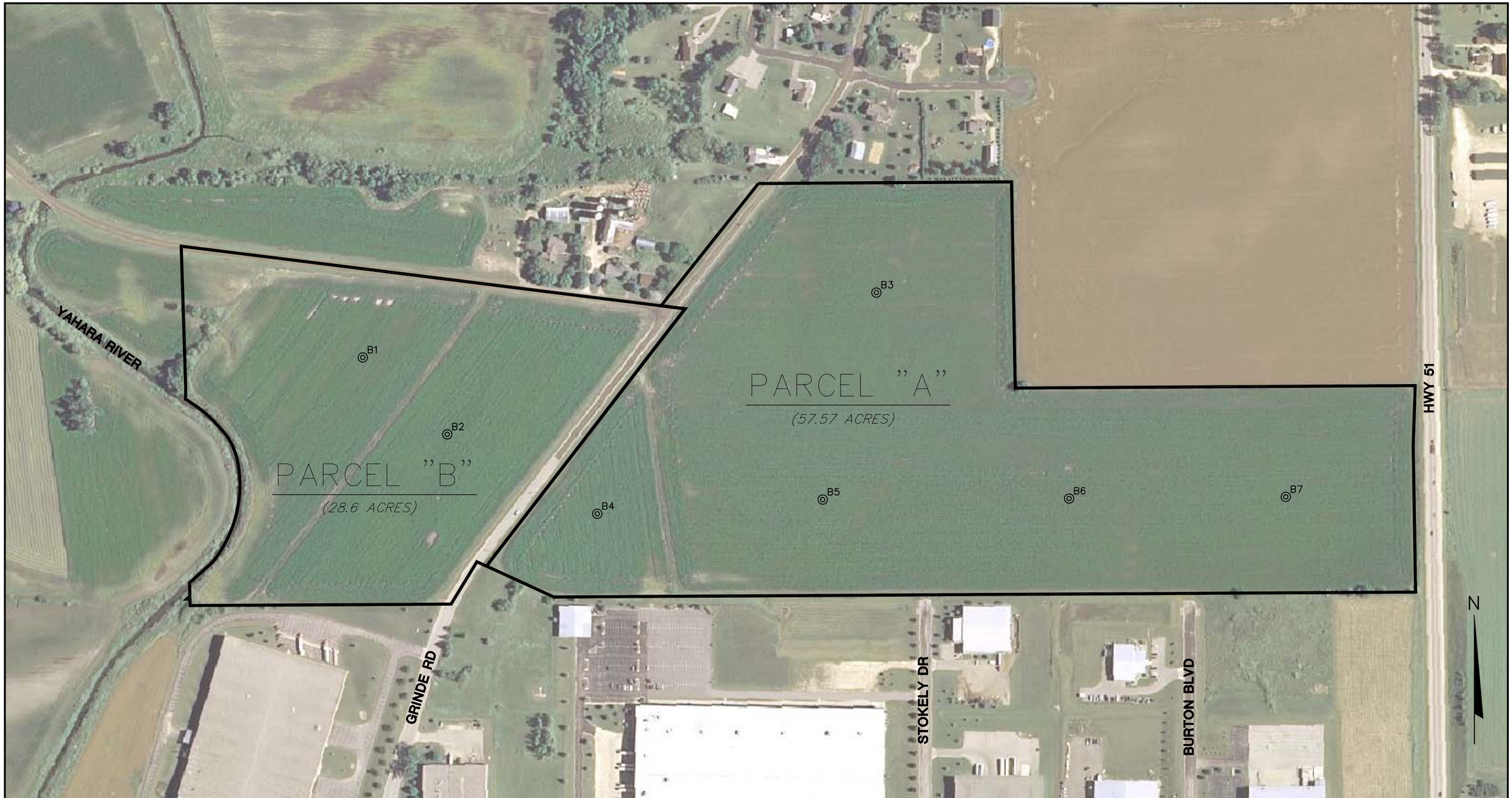
Beginning at depths of approximately 3 to 8 feet bgs, the clay and silt layers are underlain by brown sands to the ends of the borings at 20 feet bgs. The sands are typically silty with gravel and scattered cobbles. Based on the Standard Penetration Resistance values, we estimate that the in-situ relative density of the sands ranges from loose to dense. Particle size distribution reports for representative borehole sand samples are contained in **Appendix D**.

3.3 GROUNDWATER CONDITIONS

Groundwater level observations during and shortly after drilling the borings are noted at the top of the boring logs in **Appendix C**. Groundwater was encountered in 3 of the 7 borings that were each drilled to a depth of 20 feet bgs. The approximate groundwater elevations in the borings ranged from 927 to 929 feet amsl, corresponding to depths of approximately 12 to 18 feet bgs, during drilling in August 2012. Groundwater levels can vary due to changes in precipitation, infiltration, runoff, temperature, pumping rates at nearby wells, the water level of the nearby Yahara River, and other factors.

FIGURE 1

Soil Boring Location Plan



LEGEND

◎ SOIL BORING

NOTES:
1. AERIAL PHOTOGRAPH PRODUCED BY THE NATIONAL AGRICULTURE IMAGERY PROGRAM (NAIP).
2. PARCEL LINES PROVIDED BY VIERBICHER AND ASSOCIATES
3. SOIL BORING LOCATIONS SURVEYED BY SCS IN AUGUST 2012

300 0 300

SCALE: 1" = 300'

PROJECT NO.	25212211.00	DRAWN BY:	AHB
DRAWN:	08/15/12	CHECKED BY:	DN
REVISED:	08/15/12	APPROVED BY:	

ENGINEER: SCS BT SQUARED
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CLIENT: VILLAGE OF DEFOREST
DEFOREST, WISCONSIN

SITE: DEFOREST NORTH BUSINESS PARK
DEFOREST, WISCONSIN

BORING LOCATION PLAN

FIGURE 1

I:\25212211\Drawings-General\BORING LOCATION PLAN.dwg, 8/30/2012 8:43:57 AM

APPENDIX A

Goetechnical Report Limitations

Geotechnical Report Limitations

The purpose of this report is to assist in the preliminary evaluation of the property described. The scope of services included a soils exploration program and preparation of preliminary geotechnical recommendations for earthwork aspects of site development including grading, utility installation, road construction, and building foundation and floor slab construction. Generally and currently accepted soil and foundation engineering practices were used to develop this preliminary geotechnical report. This warranty is in lieu of all other warranties either expressed or implied.

Interpretation of subsurface information from the soil borings and laboratory testing program was used to develop the opinions and recommendations presented in this report. There may be variations in soil conditions between or beyond the borings that are not addressed by this report. Groundwater levels can change over time. Additional soil borings and geotechnical evaluation are recommended as the design locations, elevations, and details of the development become available.

APPENDIX B

Field Exploration Program and Laboratory Testing

Field Exploration Program and Laboratory Testing

Seven preliminary geotechnical exploratory borings were drilled on August 2, 2012, at the locations shown on Figure 1. Drilling was performed by Soil Essentials of New Glarus, Wisconsin. Hollow-stem augers were used to advance the boreholes. Soil samples were obtained in accordance with the Standard Penetration Test (ASTM D1586) using a split-spoon sampler. Boreholes were abandoned in accordance with Wisconsin Department of Natural Resources (WDNR) requirements.

The boring locations and the drilling depths were selected by SCS BT Squared (SCS) in consultation with the Village of DeForest. The boring locations were field located and marked by SCS. SCS also obtained the ground surface elevations at the boring locations. The surface elevations were derived utilizing Global Positioning System (GPS) survey procedures. The elevation datum for the survey is based upon the North American Vertical datum of 1988 (NAVD 88).

After completing the field exploration, a geotechnical engineer reviewed the driller's field logs for the borings and visually classified the soil samples in accordance with the Unified Soil Classification System (ASTM D2487). Laboratory testing was performed by CGC, Inc., of Madison, Wisconsin, on selected soil samples to determine the index properties of the soils. Testing consisted of water content, Atterberg limits, and sieve analyses. The test results are shown on the boring logs in Appendix C and on the particle size distribution reports in Appendix D. Water level measurements made in the boreholes during and shortly after drilling are shown at the top of the logs. The stratification lines on the boring logs represent the approximate boundary between soil types, and the transition may actually be gradual.

APPENDIX C

Boring Logs and Abandonment Forms

KEY FOR SOIL BORING LOGS

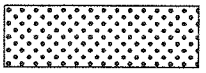
USCS SYMBOLS

GW - Gravel, well graded, little or no fines

GP - Gravel, poorly graded, little or no fines

GM - Silty gravel

GC - Clayey gravel



SW - Sand, well graded, little or no fines

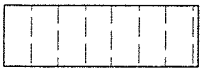
SP - Sand, poorly graded, little or no fines

SM - Silty sand

SC - Clayey sand

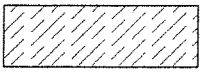
ML - Silt

CL - Lean clay, low plasticity

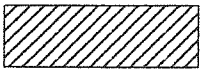


OL - Organic silt

MH - Elastic silt

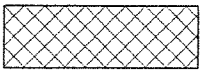


CH - Fat clay, high plasticity



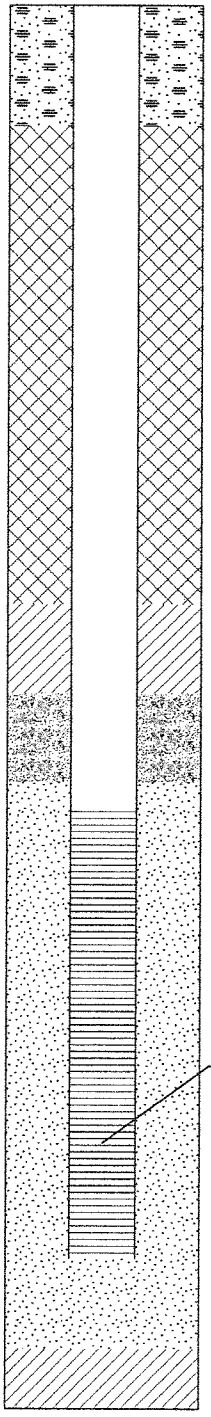
OH - Organic clay

PT - Peat, humus, soils with high organic content



FILL - Materials placed by man, variable content

MONITORING WELL CONSTRUCTION



NOTES

1) Boring logs show the conditions encountered at the specific time and location the boring was advanced. Conditions may change with time and may be significantly different at other locations, even in close proximity to the boring location.
2) Soil samples were collected only in the intervals shown on the boring logs. Geologic information shown between sampling depths is inferred.
3) USCS classification of soil samples is based on the visual-manual procedure (ASTM D-2488). Unless geotechnical laboratory data are shown on the boring log or included elsewhere in the report, the USCS classifications have not been confirmed through laboratory testing.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Watershed/Wastewater
☐ Remediation/Redev.
☐ Waste Management ☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-98 bt2

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Industrial Park Expansion SCS # 25212211.00		B1

Boring Drilled By (Firm name and name of crew chief)	Drilling Started	Drilling Completed	Drilling Method
Soil Essentials Cory Johnson	08/02/12	08/02/12	2.25" HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam.
		B1	12.2 Feet	940.3 Feet	8 Inches

Boring Location State Plane	Lat. Long.	Local Grid Location (If applicable)
SE 1/4 of NW 1/4 of Section 8, T. 9 N., R. 10 E.		Feet N., Feet E.

County	DNR County Code	Civil Town/City/or Village
Dane	13	Deforest

Sample Number	Sample Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: P200	RQD/ Comments
				FINE SILTY SAND, Brown (topsoil, based on driller's description)	SM							
S1	13	8		LEAN CLAY with FINE SAND, Mottled Brown, Hard LL=42%, PI=20%	CL				4.5+	M		WC=15.0
S2	15	9	5	SILTY SAND, Fine to Medium, with Gravel, Brown, Loose to Medium Dense, Scattered Cobbles						M		
S3	14	8								M		
S4	13	11	10							M		
					SM							Water Level at 12.2'
S5	17	8	15							W	25.9	WC=12.3
S6	18	7	20							W		
				End of Boring at 20', Abandoned with Bentonite Note: Pocket Penetrometer reading in tons per square foot is in Standard Penetration column. LL=Liquid Limit PI= Plasticity Index WC=Water Content(%)								
			25									

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

Signature	Firm
Deb Nelson	SCS BT Squared

State of Wisconsin
Department of Natural Resources

Route To:
☐ Watershed/Wastewater
☐ Remediation/Redev.
☐ Waste Management
☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-98 bt2

Facility/Project Name		License/Permit/Monitoring Number	Boring Number
Industrial Park Expansion SCS # 25212211.00			B2
Boring Drilled By (Firm name and name of crew chief)		Drilling Started	Drilling Completed / Drilling Method
Soil Essentials	Cory Johnson	08/02/12	08/02/12 / 2.25" HSA
DNR Facility Well No. / WI Unique Well No. / Common Well Name		Static Water Level	Surface Elevation / Borehole Diam.
	B2	Feet	951.0 Feet / 8 Inches
Boring Location State Plane SE 1/4 of NW 1/4 of Section 8, T. 9 N., R. 10 E.		Lat. Long.	Local Grid Location (If applicable) Feet N., Feet E.
County	DNR County Code	Civil Town/City/or Village	
Dane	13	Deforest	

Sample Number	Sample Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: P200	RQD/ Comments
				SILTY SAND, Fine, Brown, (Topsoil, based on driller's description)	SM							
S1	12	8		LEAN CLAY with FINE SAND, Mottled Brown, Hard LL=42%, PI=19%	CL				4.5+	M		WC=13.7
S2	13	15	5	SILTY SAND, Fine to Medium, with Gravel, Light Brown to Brown, Medium Dense to Dense, Scattered Cobbles						M		
S3	15	15								M		
S4	16	26	10							M		
					SM							
S5	8	31	15							M		
S6	14	25	20							M		
				End of Boring at 20'; abandoned with bentonite								
			25	Note: Pocket Penetrometer reading in tons per square foot is in Standard Penetration column. LL=Liquid Limit PI=Plasticity Index WC=Water Content(%)								

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

Signature Deb Nelson Firm SCS BT Squared

State of Wisconsin
Department of Natural Resources

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☐ Watershed/Wastewater
☐ Remediation/Redev.
☐ Waste Management ☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-98 bt2

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Industrial Park Expansion SCS # 25212211.00		B3

Boring Drilled By (Firm name and name of crew chief)	Drilling Started	Drilling Completed	Drilling Method
Soil Essentials Cory Johnson	08/02/12	08/02/12	2.25" HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam.
		B3	17.9 Feet	944.4 Feet	8 Inches

Boring Location	Lat.	Local Grid Location (If applicable)
State Plane SW 1/4 of NE 1/4 of Section 8, T. 9 N., R. 10 E.	Long.	Feet N., Feet E.

County	DNR County Code	Civil Town/City/or Village
Dane	13	Deforest

Sample Number	Sample Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: P200	RQD/ Comments
				SILTY SAND, Fine, Brown (Topsoil, based on driller's description)	SM							
S1	14	7		LEAN CLAY with FINE SAND, Mottled Brown, Hard	CL				(4.0)	M		WC=14.6
S2	11	6	5	LEAN CLAY with FINE SAND, Mottled Grey and Brown, Medium Stiff to Stiff LL=40%, PI=18%	CL				(0.6-1.8)	M		WC=25.2
S3	14	2		SILT, Brown, very Soft 2 Blows in 18" from 6'-7.5'	ML					M		WC=24.5
S4	11	36	10	SILTY SAND, Fine to Medium, with Gravel, Brown, Medium Dense to Dense, Scattered Cobbles	SM					M		
S5	6	27	15							M		
S6	14	22	20							M		
				End of Boring at 20'; abandoned with bentonite								
			25	Note: Pocket Penetrometer reading in tons per square foot is in Standard Penetration column. LL=Liquid Limit PI=Plasticity Index WC=Water Content(%)								

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

Signature	Firm
Deb Nelson	SCS BT Squared

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☐ Remediation/Redev.
☐ Waste Management
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SOIL BORING LOG INFORMATION
Form 4400-122 7-98 bt2

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Industrial Park Expansion SCS # 25212211.00		B4

Boring Drilled By (Firm name and name of crew chief)	Drilling Started	Drilling Completed	Drilling Method
Soil Essentials Cory Johnson	08/02/12	08/02/12	2.25" HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam.
		B4	16.4 Feet	945.6 Feet	8 Inches

Boring Location	Lat.	Local Grid Location (If applicable)
State Plane SE 1/4 of NW 1/4 of Section 8, T. 9 N., R. 10 E.	Long.	Feet N., Feet E.

County	DNR County Code	Civil Town/City/or Village
Dane	13	Deforest

Sample Number	Sample Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: P200	RQD/ Comments
				SILTY SAND, Fine, Brown (Topsoil, based on driller's description)	SM							
S1	15	7		LEAN CLAY with FINE SAND, Mottled Brown, Hard	CL				(4.2)	M		WC=14.9
S2	10	7	5	LEAN CLAY, Mottled Grey, Stiff LL=37%, PI=15%	CL				(1.1-1.2)	M		WC=23.5
S3	14	15		SILTY SAND, Fine, Light Brown, Medium Dense, Numerous Silt Stringers, Numerous 1/2" to 1" Silt Seams from 8.2 to 12.6'	SM					M		
S4	15	18	10							M		
												Water Level at 16.4'
S5	15	24	15	SILTY SAND, Fine to Medium, with Gravel, Brown, Medium Dense to Dense, Scattered Cobbles	SM					M		
S6	13	34	20							W		
				End of Boring at 20'; abandoned with bentonite								
			25	Note: Pocket Penetrometer reading in tons per square foot is in Standard Penetration column. LL=Liquid Limit PI=Plasticity Index WC=Water Content(%)								

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

Signature	Firm
Deb Nelson	SCS BT Squared

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

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SOIL BORING LOG INFORMATION
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Facility/Project Name: Industrial Park Expansion SCS # 25212211.00			License/Permit/Monitoring Number	Boring Number: B5
Boring Drilled By (Firm name and name of crew chief): Soil Essentials — Cory Johnson			Drilling Started: 08/02/12	Drilling Completed: 08/02/12 / Drilling Method: 2.25" HSA
DNR Facility Well No.	WI Unique Well No.	Common Well Name: B5	Static Water Level: Feet	Surface Elevation: 947.7 Feet / Borehole Diam.: 8 Inches
Boring Location: State Plane SW 1/4 of NE 1/4 of Section 8, T. 9 N., R. 10 E.			Lat. / Long.	Local Grid Location (If applicable): Feet N., Feet E.
County: Dane		DNR County Code: 13	Civil Town/City/or Village: Deforest	

Sample Number	Sample Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: P200	RQD/ Comments
				SILTY SAND, Fine, Brown (Topsoil, based on driller's description)	SM							
S1	14	9		LEAN CLAY with FINE SAND, Mottled Brown, Stiff	CL					M		WC=8.9
S2	14	39	5	SILTY SAND, Fine to Medium, with Gravel, Brown, Medium Dense to Dense, Scattered Cobbles						M		
S3	10	28								M		
S4	15	18	10							M		
					SM							
S5	15	16	15							M		
												Cave In at 17.6'
S6	18	25	20							M		
				End of Boring at 20', Abandoned with Bentonite								
				Note: WC=Water Content(%)								
			25									

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

Signature: Deb Nelson — Firm: SCS BT Squared

State of Wisconsin
Department of Natural Resources

Route To:
☐ Watershed/Wastewater
☐ Remediation/Redev.
☐ Waste Management
☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-98 bt2

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Industrial Park Expansion SCS # 25212211.00		B6

Boring Drilled By (Firm name and name of crew chief)	Drilling Started	Drilling Completed	Drilling Method
Soil Essentials Cory Johnson	08/02/12	08/02/12	2.25" HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam.
		B6	12.2 Feet	948.9 Feet	8 Inches

Boring Location	Lat. / Long.	Local Grid Location (If applicable)
State Plane SE 1/4 of NE 1/4 of Section 8, T. 9 N., R. 10 E.		Feet N., Feet E.

County	DNR County Code	Civil Town/City/or Village
Dane	13	Deforest

Sample Number	Sample Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: P200	RQD/ Comments
S1	13	8		SILTY SAND, Fine, Brown (Topsoil, based on driller's description)	SM							
				LEAN CLAY with FINE SAND, Mottled Brown, Hard LL=43%, PI=19%	CL				(4.5+)	M		WC=15.4
S2	12	13	5	SILTY SAND, Fine to Medium, Brown, with Gravel, Loose to Medium Dense	SM					M		
S3	15	8								M		
S4	14	15	10	SILTY SAND, Fine to Medium, with Gravel, Brown, Medium Dense to Dense, Scattered Cobbles						M		
S5	8	43	15		SM					M		Cave In at 17.1
S6	9	26	20							W	28.2	WC=12.2
				End of Boring at 20', Abandoned with Bentonite								
			25	Note: Pocket Penetrometer reading in tons per square foot is in Standard Penetration column. LL=Liquid Limit PI=Plasticity Index WC=Water Content(%)								

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

Signature	Firm
Deb Nelson	SCS BT Squared

State of Wisconsin
Department of Natural Resources

Route To:
☐ Watershed/Wastewater
☐ Remediation/Redev.
☐ Waste Management
☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 7-98 bt2

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Industrial Park Expansion SCS # 25212211.00		B7

Boring Drilled By (Firm name and name of crew chief)	Drilling Started	Drilling Completed	Drilling Method
	08/02/12	08/02/12	2.25" HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Static Water Level	Surface Elevation	Borehole Diam.
		B7	Feet	954.7 Feet	8 Inches

Boring Location	Lat. / Long.	Local Grid Location (If applicable)
State Plane SE 1/4 of NE 1/4 of Section 8, T. 9 N., R. 10 E.		Feet N., Feet E.

County	DNR County Code	Civil Town/City/or Village
Dane	13	Deforest

Sample Number	Sample Length Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	Max. PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: P200	RQD/ Comments
				SILTY SAND, Fine, Brown (Topsoil, based on driller's description)	SM							
S1	14	8		LEAN CLAY with FINE SAND, Mottled Brown, Hard LL=42%, PI=17%	CL				(4.4)	M		WC=16.6
S2	12	8	5	SANDY SILT, Mottled Brown, Medium Stiff	ML					M		WC=13.5
S3	15	42		SAND, Fine to Coarse, with Silt and Gravel, Brown, Dense, Scattered Cobbles						M		
S4	15	43	10		SP-SM					M		
S5	6	39	15	SILTY SAND, Fine to Medium, with Gravel, Brown, Medium Dense to Dense, Scattered Cobbles	SM					M		
S6	16	21	20	End of Boring at 20'; abandoned with bentonite Note: Pocket Penetrometer reading in tons per square foot is in Standard Penetration column. LL=Liquid Limit PI=Platicity Index WC=Water Content(%)						M		
			25									

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

Signature	Firm
Deb Nelson	SCS BT Squared

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, 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: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment ☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _ _	

Lattitude / Longitude (Degrees and Minutes) — Method Code (see instructions)

__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: E Yahara & Grinde

Well City, Village or Town: Windsor — Well ZIP Code:

Subdivision Name — Lot #

Reason For Removal From Service: No longer needed — WI Unique Well # of Replacement Well: _ _ _ _ _ _

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS): B-7

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner: E. Yahara Rd & Grinde Rd

City of Present Owner: Deforest — State: WI — ZIP Code: 53574

3. Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8-2-12

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.): 20.0 — Casing Diameter (in.): 7

Lower Drillhole Diameter (in.): 8" — Casing Depth (ft.): —

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

If yes, to what depth (feet)? — Depth to Water (feet): 12.2

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

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ 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 Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	20.0	4 Bags	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Cory Johnson		8-2-12

Street or Route: W6306 Hwy 39 — Telephone Number: (608) 527-2355

City: New Glarus — State: WI — ZIP Code: 53574

Signature of Person Doing Work: [signature] — Date Signed: 8-4-12

DNR Use Only

Date Received	Noted By

Comments

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

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☐ **Verification Only of Fill and Seal**

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

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _ _	

Lattitude / Longitude (Degrees and Minutes) — Method Code (see instructions)

__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: E Yahara & Grinde

Well City, Village or Town: Windsor — Well ZIP Code:

Subdivision Name — Lot #

Reason For Removal From Service: No longer needed — WI Unique Well # of Replacement Well: _ _ _ _ _ _

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS): B-2

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner: E. Yahara Rd & Grinde Rd

City of Present Owner: Deforest — State: WI — ZIP Code: 53574

3. Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-2-12

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.)
20.0	7
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
8"	

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

If yes, to what depth (feet)? — Depth to Water (feet): Dry

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

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ 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 Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	20.0	4 Bags	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Cory Johnson		5-2-12

Street or Route: W6366 Hwy 39 — Telephone Number: (608) 527-2355

City: New Glarus — State: WI — ZIP Code: 53574

Signature of Person Doing Work: [signature] — Date Signed: 5-4-12

DNR Use Only

Date Received	Noted By

Comments

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

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☐ **Verification Only of Fill and Seal**

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

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _ _ _	

Latitude / Longitude (Degrees and Minutes) — Method Code (see instructions)
__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: E Yahara & Grinde

Well City, Village or Town: Windsor — Well ZIP Code:

Subdivision Name — Lot #

Reason For Removal From Service: No longer Needed — WI Unique Well # of Replacement Well: _ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS): B-3

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner: E. Yahara Rd & Grinde Rd

City of Present Owner: Deforest — State: WI — ZIP Code: 53574

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-2-12

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.)
20.0	7
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
8"	

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

If yes, to what depth (feet)? — Depth to Water (feet): 17.9'

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

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ 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 Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	20'	4.5 Bags	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Cory Johnson		5-2-12

Street or Route: W6306 Hwy 39 — Telephone Number: (608) 577-2355

City: New Glarus — State: WI — ZIP Code: 53574

Signature of Person Doing Work — Date Signed: 8-4-12

DNR Use Only

Date Received	Noted By
Comments	

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

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☐ **Verification Only of Fill and Seal**

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

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _ _	

Latitude / Longitude (Degrees and Minutes) — Method Code (see instructions)

__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

¼ / ¼	¼	Section	Township	Range	
or Gov't Lot #			N		☐ E ☐ W

Well Street Address: E Yahara & Grinde

Well City, Village or Town: Windsor — Well ZIP Code:

Subdivision Name — Lot #

Reason For Removal From Service: No longer Needed — WI Unique Well # of Replacement Well: _ _ _ _ _ _

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS): B-54

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner: E. Yahara Rd & Grinde Rd

City of Present Owner: Deforest — State: WI — ZIP Code: 53574

3. Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 8-2-12

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.)
20.0	7
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
8"	

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

If yes, to what depth (feet)?	Depth to Water (feet)
	16.4

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

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ 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 Chips	Surface	20.0	4.5 Bags	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Cory Johnson		8-2-12

Street or Route: W6386 Hwy 39 — Telephone Number: (608) 527-2355

City: New Glarus — State: WI — ZIP Code: 53574

Signature of Person Doing Work — Date Signed: 8-4-12

DNR Use Only

Date Received	Noted By

Comments

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

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☐ **Verification Only of Fill and Seal**

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

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _ _	

Lattitude / Longitude (Degrees and Minutes) — Method Code (see instructions)

__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

¼ / ¼	¼	Section	Township	Range	
or Gov't Lot #			N		☐ E ☐ W

Well Street Address: E Yahara & Grinde

Well City, Village or Town: Windsor — Well ZIP Code:

Subdivision Name — Lot #

Reason For Removal From Service: No longer Needed — WI Unique Well # of Replacement Well: _ _ _ _ _ _

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS): B-5

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner: E. Yahara Rd & Grinde Rd

City of Present Owner: Deforest — State: WI — ZIP Code: 53574

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-2-12

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.)
20.0	—
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
8"	—

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

If yes, to what depth (feet)? — Depth to Water (feet): 17.6

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

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ 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 Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	20.0	4.5 Bags	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Cory Johnson		5-2-12

Street or Route: W6300 Hwy 39 — Telephone Number: (608) 527-2355

City: New Glarus — State: WI — ZIP Code: 53574

Signature of Person Doing Work: [signature] — Date Signed: 5-4-12

DNR Use Only

Date Received	Noted By

Comments

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

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☐ **Verification Only of Fill and Seal**

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

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _ _ _	

Latitude / Longitude (Degrees and Minutes) | Method Code (see instructions)
__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: E Yahara & Grinde

Well City, Village or Town: Windsor | Well ZIP Code:

Subdivision Name: | Lot #:

Reason For Removal From Service: No longer Needed | WI Unique Well # of Replacement Well: _ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name:

Facility ID (FID or PWS): B-6

License/Permit/Monitoring #:

Original Well Owner:

Present Well Owner:

Mailing Address of Present Owner: E. Yahara Rd & Grinde Rd

City of Present Owner: Deforest | State: WI | ZIP Code: 53574

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-2-12

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.)
20.0	—
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
8"	—

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

If yes, to what depth (feet)? | Depth to Water (feet): 17.1'

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

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ 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
Bentonite Chips	Surface	20.0'	4.25 Bags	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Cory Johnson		5-2-12

Street or Route: W6306 Hwy 39 | Telephone Number: (608) 527-2355

City: New Glarus | State: WI | ZIP Code: 53574

Signature of Person Doing Work: [signature] | Date Signed: 5-4-12

DNR Use Only

Date Received	Noted By
Comments	

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

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, 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: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment ☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Dane	_ _ _ _ _ _	

Latitude / Longitude (Degrees and Minutes) ___ ___ ° ___ ___ . ___ ___ ___ 'N / ___ ___ ° ___ ___ . ___ ___ ___ 'W — Method Code (see instructions): _____

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address: E Yahara & Grinde

Well City, Village or Town: Windsor — Well ZIP Code: _____

Subdivision Name: _____ — Lot #: _____

Reason For Removal From Service: No longer needed — WI Unique Well # of Replacement Well: _ _ _ _ _ _

2. Facility / Owner Information

Facility Name: _____

Facility ID (FID or PWS): B-7

License/Permit/Monitoring #: _____

Original Well Owner: _____

Present Well Owner: _____

Mailing Address of Present Owner: E. Yahara Rd & Grinde Rd

City of Present Owner: Deforest — State: WI — ZIP Code: 53574

3. Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 5-2-12

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.)
20.0	7
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
8"	—

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

If yes, to what depth (feet)? _____ — Depth to Water (feet): Dry

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

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ 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 ☐ Clay-Sand Slurry (11 lb./gal. wt.) ☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " " ☐ Concrete ☐ 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 Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	20.0	4.5 Bags	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Cory Johnson		5-2-12

Street or Route: W6306 Hwy 39 — Telephone Number: (608) 527-2355

City: New Glarus — State: WI — ZIP Code: 53574

Signature of Person Doing Work: _____ — Date Signed: 5-4-12

DNR Use Only

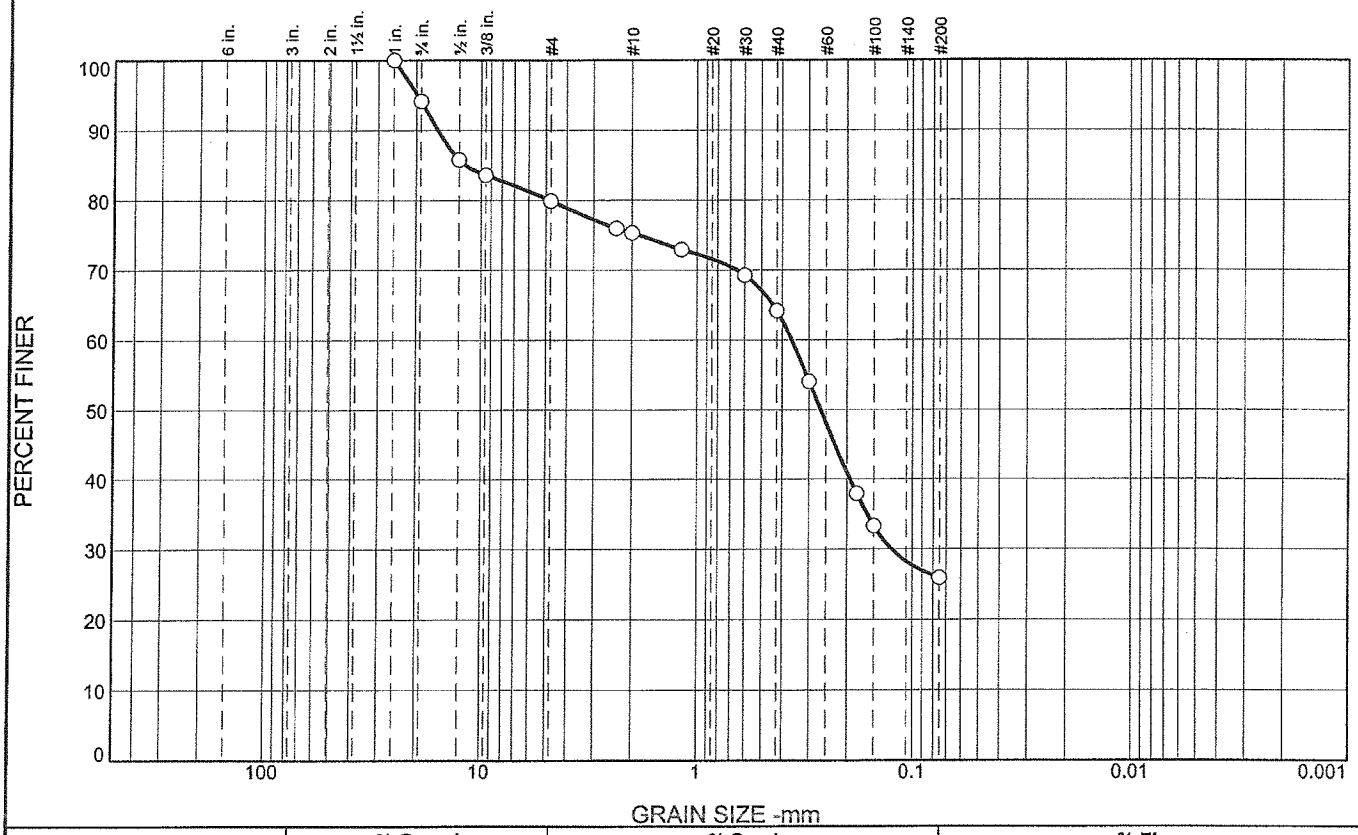
Date Received	Noted By

Comments: _____

APPENDIX D

Particle Size Distribution Reports

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	5.9	14.2	4.6	11.1	38.3	25.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
3/4	94.1		
1/2	85.8		
3/8	83.6		
#4	79.9		
#8	76.0		
#10	75.3		
#16	72.9		
#30	69.3		
#40	64.2		
#50	54.1		
#80	37.9		
#100	33.3		
#200	25.9		

* (no specification provided)

Material Description

Brown Fine to Medium Sand, Some Silt and Gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 15.8994 D_{85}= 11.8838 D_{60}= 0.3618
D_{50}= 0.2650 D_{30}= 0.1244 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO=

Remarks

Natural Moisture = 12.3% (No charge)

Sample Number: B1 S5 **Depth:** 13.5-15'

Date: 8/9/12

CGC, Inc.

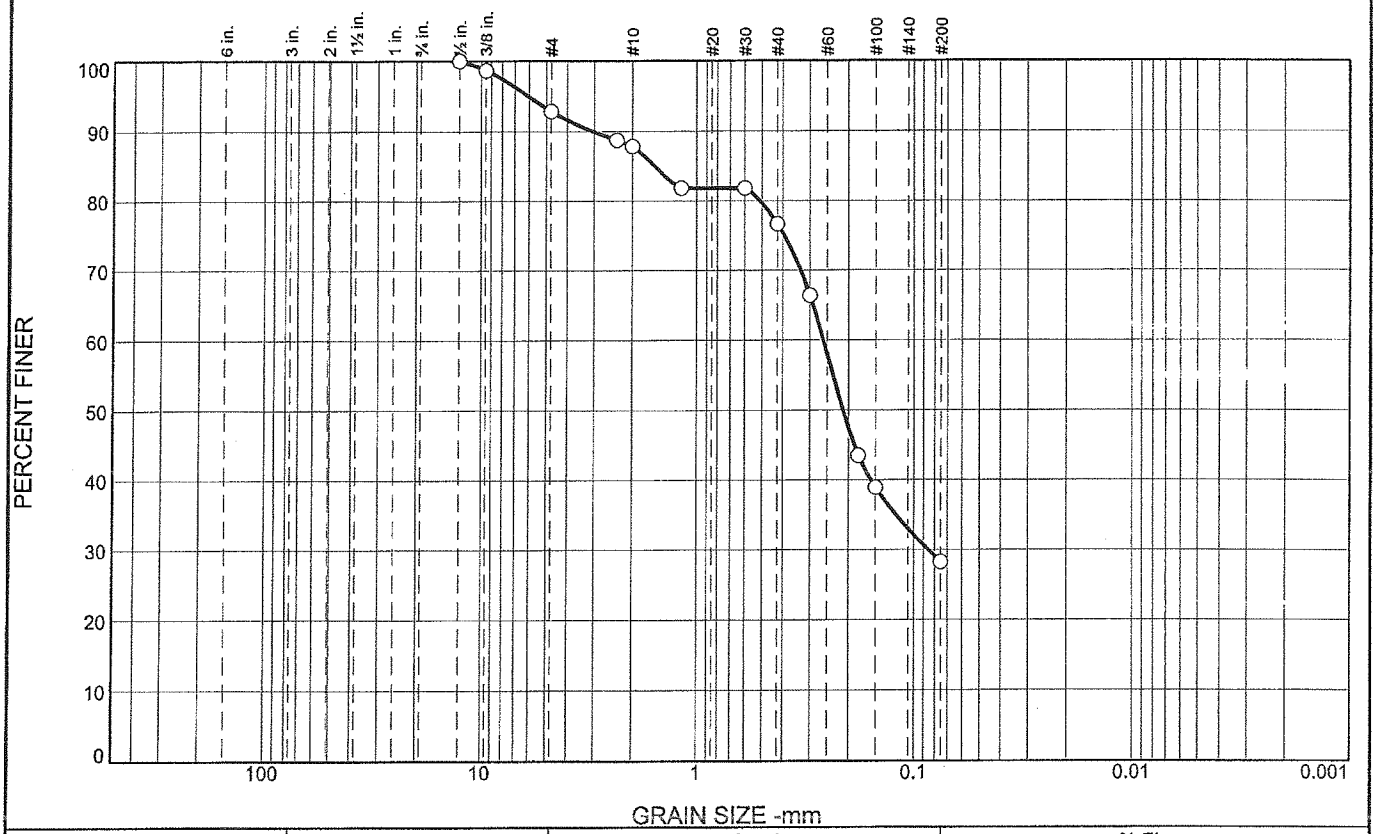
Client: SCS/BTSquared

Project: Industrial Park Expansion (Deforest, WI) Site Assessment (SCS# 25212211. 00)

Project No: C11086-16 **Figure**

Tested By: DRW **Checked By:** DAS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	7.1	5.1	11.1	48.5	28.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2	100.0		
3/8	98.7		
#4	92.9		
#8	88.8		
#10	87.8		
#16	81.8		
#30	81.8		
#40	76.7		
#50	66.4		
#80	43.5		
#100	38.9		
#200	28.2		

* (no specification provided)

Material Description

Brown Fine to Medium Sand, Some Silt, Little Gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 3.0544 D_{85}= 1.5743 D_{60}= 0.2602
D_{50}= 0.2117 D_{30}= 0.0859 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO=

Remarks

Natural Moisture = 12.2% (No charge)

Sample Number: B6 S6 **Depth:** 18.5-20'

Date: 8/9/12

CGC, Inc.

Client: SCS/BTSquared

Project: Industrial Park Expansion (Deforest, WI) Site Assessment (SCS# 25212211. 00)

Project No: C11086-16 **Figure**

Tested By: DRW **Checked By:** DAS