



June 6, 2018

Project Reference #17076

Ms. Nancy Ryan
c/o Mr. Chue Yee Yang, Environmental Program Associate
Wisconsin Department of Natural Resources
Remediation & Redevelopment Program
2300 N. Dr. Martin Luther King Jr. Drive
Milwaukee, WI 53212

**Subject: Monitoring Well Abandonment Forms
MSOE Diercks Computational Science Hall Development
1025 N. Milwaukee Street, Milwaukee, WI 53202
WDNR BRRTS #02-41-581016, WDNR FID #241343410**

Dear Ms. Ryan:

On behalf of Milwaukee School of Engineering (MSOE), The Sigma Group, Inc. (Sigma) conducted a second groundwater sampling event at the property referenced above (hereinafter the "Site") on May 14, 2018. Sigma transmitted the groundwater analytical data to the Wisconsin Department of Natural Resources (WDNR) in a May 25th email and recommended that the five groundwater monitoring wells (MW-1 through MW-5) be abandoned due to the lack of impacts above NR 140 Enforcement Standards and the pending Site construction. WDNR issued a May 31st email which concurred that no additional groundwater monitoring will be required for the Site and that the monitoring wells may be abandoned.

On June 1, 2018, Sigma abandoned monitoring wells MW-1 through MW-5 with bentonite chips in accordance with NR 141 regulations. Copies of the well abandonment forms (WDNR Form 3300-5, revised 4/2015) are included in **Attachment 1**. As requested on the abandonment forms, copies of monitoring well construction reports are also included.

If you have any questions about this submittal or the project in general, please contact Sigma at (414) 643-4200.

Sincerely,

THE SIGMA GROUP, INC.

Adam J. Roder, P.E.
Senior Engineer

Enclosures:

Attachment 1 - Monitoring Well Abandonment Forms

cc: Dr. Blake Wentz - MSOE (via email: wentz@msoe.edu)

ATTACHMENT 1
WELL ABANDONMENT FORMS

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: Milwaukee WI Unique Well # of Removed Well: WA091 Hicap #: MW-1

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

1/4 NW 1/4 NW Section: 28 Township: 7 N Range: 22 E W

or Gov't Lot # _____

Well Street Address: 1025 N. Milwaukee St.

Well City, Village or Town: Milwaukee Well ZIP Code: 53202

Subdivision Name _____ Lot # _____

2. Facility / Owner Information

Facility Name: MSOE Diercks Computational Science Hall

Facility ID (FID or PWS): 241343410

License/Permit/Monitoring # _____

Original Well Owner: MSOE

Present Well Owner: MSOE

Mailing Address of Present Owner: 1025 N. Broadway

City of Present Owner: Milwaukee State: WI ZIP Code: 53202

Reason for Removal from Service: site construction WI Unique Well # of Replacement Well: _____

3. Filled & Sealed Well / Drillhole / Borehole Information

Monitoring Well Original Construction Date (mm/dd/yyyy): 02/26/2018

Water Well

Borehole / Drillhole 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.): 32.7 Casing Diameter (in.): 2

Lower Drillhole Diameter (in.): _____ Casing Depth (ft.): _____

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? _____ Depth to Water (feet): 19.75

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

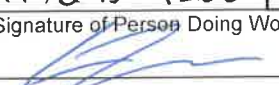
Granular Bentonite Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

Material	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
<u>3/8" bentonite chips</u>	<u>Surface</u>	<u>32.7</u>	<u>5-gallons</u>	

6. Comments

7. Supervision of Work

Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing: <u>The Sigma Group, Inc.</u>	License #: _____	Date of Filling & Sealing or Verification (mm/dd/yyyy): <u>06/01/2018</u>	Date Received: _____	Noted By: _____	
Street or Route: <u>1300 W. Canal street</u>	Telephone Number: <u>(414) 643-4200</u>	Comments: _____			
City: <u>Milwaukee</u>	State: <u>WI</u>	ZIP Code: <u>53233</u>	Signature of Person Doing Work: 	Date Signed: <u>06/01/2018</u>	

Instructions

Well Filling and Sealing

Wisconsin Administrative Code (NR 811, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/ drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

General Instructions: Fill out Well/Drillhole/Borehole Filling & Sealing Report Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Verification Only of Fill and Seal: If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, including the date of Filling and Sealing or verification. It will be implied that you did do the filling and sealing work or the verification as stated in Part 7.

Route to: Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

(1) WELL LOCATION INFORMATION

WI Unique Well #: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

Hicap #: If this was a high capacity well, enter the number assigned to the well by the Department.

Well Location: Locate the well by Public Land Survey (Gov't Lot or ¼ ¼, ¼, Section, Township and Range) AND latitude and longitude coordinates, using GPS or on-line map locators.

Format Code: Check which format you are reporting in: DD = Decimal Degrees ____ . ____ ° or DDM = Degrees Decimal Minutes ____ ° ____ . ____ ' (Place decimal point appropriately).

Method Code: Check which method you are using to determine latitude/longitude: GPS008 = GPS Receiver; SCR002 = Online Map/Viewer; OTH001 = Other.

(2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility ID: Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

License/Permit/Monitoring #: Fill in number assigned to facility by the Department. If unknown, leave blank.

Present Well Owner: Fill in the name, address, city, state and ZIP code of the present owner.

(3) FILLED & SEALED WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format. This section should include information about the original well.

Depth to Water: Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

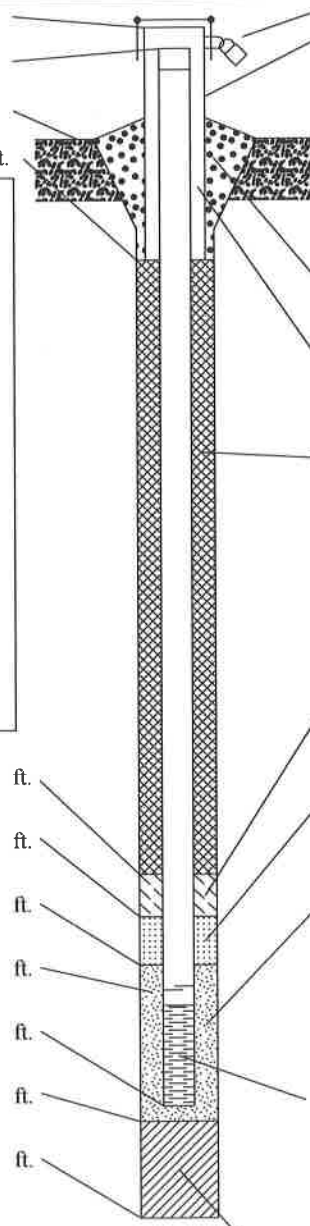
(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing or Verification: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed or verified filled & sealed.

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

Facility/Project Name Diercks Computational Science Hall		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.		Well Name MW-1	
Facility License, Permit or Monitoring No.		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or _____		Wis. Unique Well No. WAO91 DNR Well Number	
Facility ID		St. Plane _____ ft. N. _____ ft. E. S/C/N		Date Well Installed 02/26/2018	
Type of Well Well Code 11/mw		Section Location of Waste/Source NW 1/4 of NW 1/4 of Sec. 28, T. 7 N, R. 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: (Person's Name and Firm) Adam Woerpel	
Distance from Waste/Source ft. _____		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known		Gov. Lot Number	
Enf. Stds. Apply <input type="checkbox"/>				GESTRA	

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Well casing, top elevation <u>624.04</u> ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>8</u> in. b. Length: <u>1</u> ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation <u>624.4</u> ft. MSL	d. Additional protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: flushmount
D. Surface seal, bottom <u>608.9</u> ft. MSL or <u>15.5</u> ft.	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
<div style="border: 1px solid black; padding: 5px;"> <p>12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input checked="" type="checkbox"/> SW <input checked="" type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input checked="" type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/></p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/></p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____</p> <p>17. Source of water (attach analysis, if required): _____</p> </div>	
E. Bentonite seal, top <u>624.4</u> ft. MSL or <u>0.0</u> ft.	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
F. Fine sand, top <u>608.9</u> ft. MSL or <u>15.5</u> ft.	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft ³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08
G. Filter pack, top <u>607.9</u> ft. MSL or <u>16.5</u> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
H. Screen joint, top <u>621.4</u> ft. MSL or <u>3.0</u> ft.	7. Fine sand material: Manufacturer, product name & mesh size a. #4000 b. Volume added _____ ft ³
I. Well bottom <u>591.4</u> ft. MSL or <u>33.0</u> ft.	8. Filter pack material: Manufacturer, product name & mesh size a. #5 b. Volume added _____ ft ³
J. Filter pack, bottom <u>591.9</u> ft. MSL or <u>32.5</u> ft.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
K. Borehole, bottom <u>591.4</u> ft. MSL or <u>33.0</u> ft.	10. Screen material: PVC a. Screen Type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
L. Borehole, diameter <u>9.3</u> in.	b. Manufacturer _____ c. Slot size: <u>0.010</u> in. d. Slotted length: <u>15.0</u> ft.
M. O.D. well casing <u>2.25</u> in.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Slough <input checked="" type="checkbox"/>
N. I.D. well casing <u>2.05</u> in.	



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

Signature Gail True

Firm The Sigma Group
1300 W Canal St Milwaukee, WI 53233

Tel: 414-643-4200
Fax: 414-643-4210

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 **2. Facility / Owner Information**

County: Milwaukee WI Unique Well # of Removed Well: WA092 Hicap #: MW-2
 Latitude / Longitude (see instructions): _____ N _____ W Format Code: DD DDM Method Code: GPS008 SCR002 OTH001
 1/4 NW 1/4 NW Section: 28 Township: 7 N Range: 22 E W
 or Gov't Lot # _____
 Well Street Address: 1025 N. Milwaukee St.
 Well City, Village or Town: Milwaukee Well ZIP Code: 53202
 Subdivision Name _____ Lot # _____

Facility Name: MSOE Dicrcks Computational Science Hall
 Facility ID (FID or PWS): 2413A3A10
 License/Permit/Monitoring #: _____
 Original Well Owner: MSOE
 Present Well Owner: MSOE
 Mailing Address of Present Owner: 1025 N. Broadway
 City of Present Owner: Milwaukee State: WI ZIP Code: 53202

Reason for Removal from Service: site construction WI Unique Well # of Replacement Well: _____

3. Filled & Sealed Well / Drillhole / Borehole Information

Monitoring Well Original Construction Date (mm/dd/yyyy): 02/26/2018
 Water Well
 Borehole / Drillhole 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.): 28.6 Casing Diameter (in.): 2

Lower Drillhole Diameter (in.): _____ Casing Depth (ft.): _____

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? _____ Depth to Water (feet): 18.42

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

3/8" bentonite chips

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	<u>28.6</u>	<u>5 gallons</u>	

6. Comments

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing: The Sigma Group, Inc. License #: _____ Date of Filling & Sealing or Verification (mm/dd/yyyy): 06/01/2018
 Street or Route: 1300 W. Canal street Telephone Number: (414) 643-4200
 City: Milwaukee State: WI ZIP Code: 53233 Signature of Person Doing Work: _____ Date Signed: 06/01/2018

Instructions

Well Filling and Sealing

Wisconsin Administrative Code (NR 811, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

General Instructions: Fill out Well/Drillhole/Borehole Filling & Sealing Report Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Verification Only of Fill and Seal: If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, including the date of Filling and Sealing or verification. It will be implied that you did do the filling and sealing work or the verification as stated in Part 7.

Route to: Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

(1) WELL LOCATION INFORMATION

WI Unique Well #: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

Hicap #: If this was a high capacity well, enter the number assigned to the well by the Department.

Well Location: Locate the well by Public Land Survey (Gov't Lot or $\frac{1}{4}$ $\frac{1}{4}$, $\frac{1}{4}$, Section, Township and Range) AND latitude and longitude coordinates, using GPS or on-line map locators.

Format Code: Check which format you are reporting in: DD = Decimal Degrees ____ . ____ ° or DDM = Degrees Decimal Minutes ____ ° ____ . ____ ' (Place decimal point appropriately).

Method Code: Check which method you are using to determine latitude/longitude: GPS008 = GPS Receiver; SCR002 = Online Map/Viewer; OTH001 = Other.

(2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility ID: Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

License/Permit/Monitoring #: Fill in number assigned to facility by the Department. If unknown, leave blank.

Present Well Owner: Fill in the name, address, city, state and ZIP code of the present owner.

(3) FILLED & SEALED WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format. This section should include information about the original well.

Depth to Water: Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing or Verification: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed or verified filled & sealed.

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

Facility/Project Name Diercks Computational Science Hall		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name mw-2	
Facility License, Permit or Monitoring No.		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. DNR Well Number	
Facility ID		Lat. " ' " Long. " ' " or		Date Well Installed 02/26/2018	
Type of Well Well Code 11/mw		St. Plane _____ ft. N. _____ ft. E. S / C / N		Well Installed By: (Person's Name and Firm) Adam Woerpel	
Distance from Waste/ Source ft.		Section Location of Waste/Source NW 1/4 of NW 1/4 of Sec. 28, T. 7 N, R. 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Gov. Lot Number	
Enf. Stds. Apply <input type="checkbox"/>		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known		Gestra	

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Well casing, top elevation <u>625.07</u> ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>8</u> in. b. Length: <u>1</u> ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation <u>625.6</u> ft. MSL	d. Additional protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>flushmount</u>
D. Surface seal, bottom <u>613.6</u> ft. MSL or <u>12.0</u> ft.	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
<div style="border: 1px solid black; padding: 5px;"> <p>12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input checked="" type="checkbox"/> SW <input checked="" type="checkbox"/> SP <input type="checkbox"/> SM <input checked="" type="checkbox"/> SC <input type="checkbox"/> ML <input checked="" type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/></p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/></p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____</p> <p>17. Source of water (attach analysis, if required): _____</p> </div>	
E. Bentonite seal, top <u>625.6</u> ft. MSL or <u>0.0</u> ft.	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
F. Fine sand, top <u>613.6</u> ft. MSL or <u>12.0</u> ft.	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft ³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08
G. Filter pack, top <u>612.6</u> ft. MSL or <u>13.0</u> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
H. Screen joint, top <u>622.6</u> ft. MSL or <u>3.0</u> ft.	7. Fine sand material: Manufacturer, product name & mesh size a. <u>#4000</u> b. Volume added _____ ft ³
I. Well bottom <u>597.1</u> ft. MSL or <u>28.5</u> ft.	8. Filter pack material: Manufacturer, product name & mesh size a. <u>#5</u> b. Volume added _____ ft ³
J. Filter pack, bottom <u>597.1</u> ft. MSL or <u>28.5</u> ft.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
K. Borehole, bottom <u>595.6</u> ft. MSL or <u>30.0</u> ft.	10. Screen material: <u>PVC</u> a. Screen Type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
L. Borehole, diameter <u>9.3</u> in.	b. Manufacturer _____ c. Slot size: <u>0.010</u> in. d. Slotted length: <u>15.0</u> ft.
M. O.D. well casing <u>2.25</u> in.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Slough <input checked="" type="checkbox"/>
N. I.D. well casing <u>2.05</u> in.	

I hereby certify that the information on this form is true and correct to the best of my knowledge.
 Signature [Signature] Firm The Sigma Group
 1300 W Canal St Milwaukee, WI 53233
 Tel: 414-643-4200 Fax: 414-643-4210

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.

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 **2. Facility / Owner Information**

County Milwaukee WI Unique Well # of Removed Well WA093 Hicap # MW-3

Facility Name MSOE Diercks Computational Science Hall

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

Facility ID (FID or PWS) 241343A10
License/Permit/Monitoring # _____

1/4 NW 1/4 NW Section 28 Township 7 N Range 22 E W

Original Well Owner MSOE
Present Well Owner MSOE

Well Street Address 1025 N. Milwaukee St.

Mailing Address of Present Owner 1025 N. Broadway

Well City, Village or Town Milwaukee Well ZIP Code 53202

City of Present Owner Milwaukee State WI ZIP Code 53202

Subdivision Name _____ Lot # _____

Reason for Removal from Service site construction WI Unique Well # of Replacement Well _____

3. Filled & Sealed Well / Drillhole / Borehole Information

Monitoring Well Water Well Borehole / Drillhole
Original Construction Date (mm/dd/yyyy) 02/26/2018
If a Well Construction Report is available, please attach.

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

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

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): _____

Formation Type:
 Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.) 23.1 Casing Diameter (in.) 2

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

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

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? _____ Depth to Water (feet) 16.43

5. Material Used to Fill Well / Drillhole

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	<u>23.1</u>	<u>4 gallons</u>	

6. Comments

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing The Sigma Group, Inc. License # _____ Date of Filling & Sealing or Verification (mm/dd/yyyy) 06/01/2018 Date Received _____ Noted By _____
Street or Route 1300 W. Canal street Telephone Number (414) 643-4200 Comments _____
City Milwaukee State WI ZIP Code 53233 Signature of Person Doing Work _____ Date Signed 06/01/2018

Instructions

Well Filling and Sealing

Wisconsin Administrative Code (NR 811, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

General Instructions: Fill out Well/Drillhole/Borehole Filling & Sealing Report Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Verification Only of Fill and Seal: If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, including the date of Filling and Sealing or verification. It will be implied that you did do the filling and sealing work or the verification as stated in Part 7.

Route to: Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

(1) WELL LOCATION INFORMATION

WI Unique Well #: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

Hicap #: If this was a high capacity well, enter the number assigned to the well by the Department.

Well Location: Locate the well by Public Land Survey (Gov't Lot or $\frac{1}{4}$ $\frac{1}{4}$, $\frac{1}{4}$, Section, Township and Range) AND latitude and longitude coordinates, using GPS or on-line map locators.

Format Code: Check which format you are reporting in: DD = Decimal Degrees ____ . ____ ° or DDM = Degrees ____ ° ____ ' (Place decimal point appropriately).

Method Code: Check which method you are using to determine latitude/longitude: GPS008 = GPS Receiver; SCR002 = Online Map/Viewer; OTH001 = Other.

(2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility ID: Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

License/Permit/Monitoring #: Fill in number assigned to facility by the Department. If unknown, leave blank.

Present Well Owner: Fill in the name, address, city, state and ZIP code of the present owner.

(3) FILLED & SEALED WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format. This section should include information about the original well.

Depth to Water: Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing or Verification: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed or verified filled & sealed.

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

Facility/Project Name Diercks Computational Science Hall	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.	Well Name <u>MW-3</u>
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. _____ Long. _____ or _____	Wis. Unique Well No. <u>WA093</u> DNR Well Number _____
Facility ID	St. Plane _____ ft. N. _____ ft. E. S/C/N	Date Well Installed <u>02/26/2018</u>
Type of Well Well Code <u>11/mw</u>	Section Location of Waste/Source NW <u>1/4</u> of NW <u>1/4</u> of Sec. <u>28</u> , T. <u>7</u> N, R. <u>22</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) <u>Adam Woerpel</u> <u>GESTRA</u>
Distance from Waste/Source ft. _____	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Gov. Lot Number _____

A. Protective pipe, top elevation _____ ft. MSL Yes No

B. Well casing, top elevation 622.96 ft. MSL

C. Land surface elevation 623.5 ft. MSL

D. Surface seal, bottom 617.0 ft. MSL or 6.5 ft.

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

13. Sieve analysis 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 623.5 ft. MSL or 0.0 ft.

F. Fine sand, top 615.5 ft. MSL or 8.0 ft.

G. Filter pack, top 614.5 ft. MSL or 9.0 ft.

H. Screen joint, top 620.5 ft. MSL or 3.0 ft.

I. Well bottom 600.0 ft. MSL or 23.5 ft.

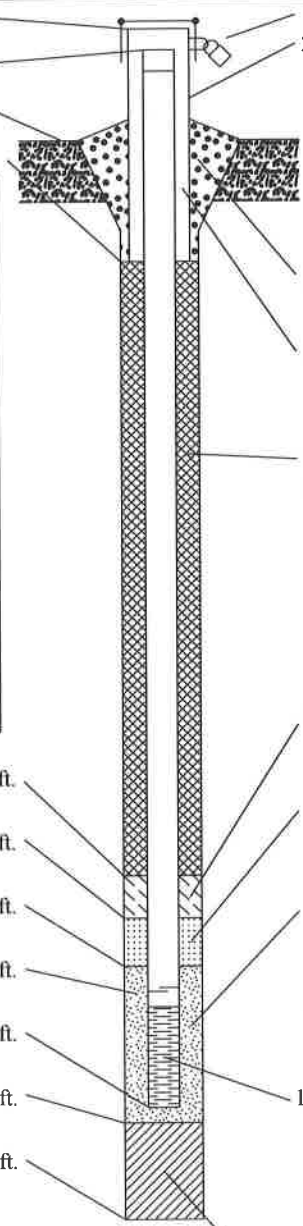
J. Filter pack, bottom 600.5 ft. MSL or 23.0 ft.

K. Borehole, bottom 598.5 ft. MSL or 25.0 ft.

L. Borehole, diameter 9.3 in.

M. O.D. well casing 2.25 in.

N. I.D. well casing 2.05 in.



1. Cap and lock? Yes No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel 0 4
Other _____

d. Additional protection? Yes No
If yes, describe: flushmount

3. Surface seal: Bentonite 3 0
Concrete 0 1
Other _____

4. Material between well casing and protective pipe: Bentonite 3 0
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. _____ Ft³ 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. _____ #4000
b. Volume added _____ ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. _____ #5
b. Volume added _____ ft³

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 _____
c. Slot size: 0.010 in.
d. Slotted length: 15.0 ft.

11. Backfill material (below filter pack): None 1 4
Slough Other _____

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

Signature [Signature] Firm The Sigma Group 1300 W Canal St Milwaukee, WI 53233 Tel: 414-643-4200 Fax: 414-643-4210

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.

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 **2. Facility / Owner Information**

County Milwaukee		WI Unique Well # of Removed Well WA094		Hicap # MW-4		Facility Name MSOE Dicrcks Computational Science Hall			
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS) 241343410			
1/4 1/4 NW 1/4 NW or Gov't Lot #		Section 28		Township 7 N		Range 22		Original Well Owner MSOE	
Well Street Address 1025 N. Milwaukee St.		Well ZIP Code 53202				Present Well Owner MSOE			
Well City, Village or Town Milwaukee		Subdivision Name		Lot #		Mailing Address of Present Owner 1025 N. Broadway		City of Present Owner Milwaukee	
Reason for Removal from Service site construction		WI Unique Well # of Replacement Well		State WI		ZIP Code 53202			

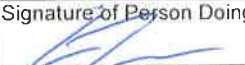
3. Filled & Sealed Well / Drillhole / Borehole Information **4. Pump, Liner, Screen, Casing & Sealing Material**

<input checked="" type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 02/27/2018		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach. <input checked="" type="checkbox"/>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Borehole / Drillhole				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Construction Type:				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Other (specify): _____				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Formation Type:				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Total Well Depth From Ground Surface (ft.) 24.7		Casing Diameter (in.) 2		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Lower Drillhole Diameter (in.)		Casing Depth (ft.)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
If yes, to what depth (feet)?		Depth to Water (feet) 15.80		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

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	24.7	4.5 gallons	

6. Comments

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing The Sigma Group, Inc.		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 06/01/2018	Date Received	Noted By
Street or Route 1300 W. Canal street		Telephone Number (414) 643-4200		Comments	
City Milwaukee	State WI	ZIP Code 53233	Signature of Person Doing Work 	Date Signed 06/01/2018	

Instructions

Well Filling and Sealing

Wisconsin Administrative Code (NR 811, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

General Instructions: Fill out Well/Drillhole/Borehole Filling & Sealing Report Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Verification Only of Fill and Seal: If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, including the date of Filling and Sealing or verification. It will be implied that you did do the filling and sealing work or the verification as stated in Part 7.

Route to: Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

(1) WELL LOCATION INFORMATION

WI Unique Well #: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

Hicap #: If this was a high capacity well, enter the number assigned to the well by the Department.

Well Location: Locate the well by Public Land Survey (Gov't Lot or $\frac{1}{4}$, $\frac{1}{4}$, Section, Township and Range) AND latitude and longitude coordinates, using GPS or on-line map locators.

Format Code: Check which format you are reporting in: DD = Decimal Degrees ____ . ____ ° or DDM = Degrees Decimal Minutes ____ ° ____ . ____ ' (Place decimal point appropriately).

Method Code: Check which method you are using to determine latitude/longitude: GPS008 = GPS Receiver; SCR002 = Online Map/Viewer; OTH001 = Other.

(2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility ID: Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

License/Permit/Monitoring #: Fill in number assigned to facility by the Department. If unknown, leave blank.

Present Well Owner: Fill in the name, address, city, state and ZIP code of the present owner.

(3) FILLED & SEALED WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format. This section should include information about the original well.

Depth to Water: Enter depth to water from ground surface.

- (4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

- (5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

- (6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

- (7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing or Verification: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed or verified filled & sealed.

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

Facility/Project Name Diercks Computational Science Hall	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.	Well Name MW-4
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. WA094 DNR Well Number
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed 02/27/2018
Type of Well Well Code 11/mw	Section Location of Waste/Source NW 1/4 of NW 1/4 of Sec. 28 , T. 7 N, R. 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) Adam Woerpel
Distance from Waste/Source ft. <input type="checkbox"/> Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Gov. Lot Number GESTRA

A. Protective pipe, top elevation _____ ft. MSL Yes No

B. Well casing, top elevation **622.31** ft. MSL

C. Land surface elevation **622.7** ft. MSL

D. Surface seal, bottom **614.7** ft. MSL or **8.0** 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 **622.7** ft. MSL or **0.0** ft.

F. Fine sand, top **614.7** ft. MSL or **8.0** ft.

G. Filter pack, top **613.7** ft. MSL or **9.0** ft.

H. Screen joint, top **619.7** ft. MSL or **3.0** ft.

I. Well bottom **597.7** ft. MSL or **25.0** ft.

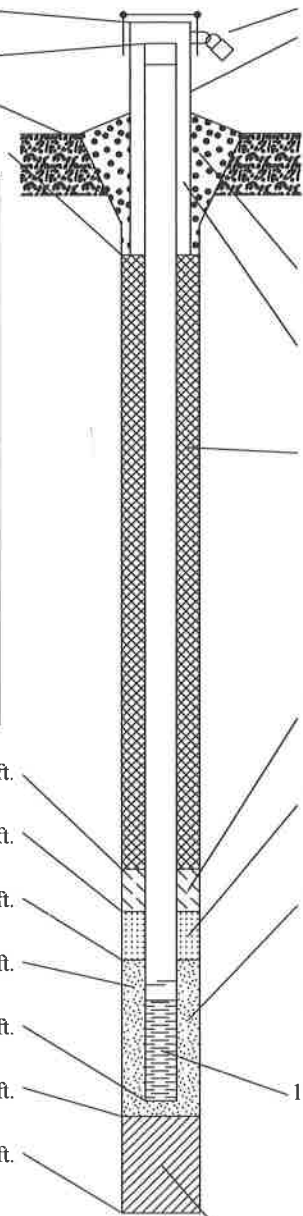
J. Filter pack, bottom **598.2** ft. MSL or **24.5** ft.

K. Borehole, bottom **597.7** ft. MSL or **25.0** ft.

L. Borehole, diameter **9.3** in.

M. O.D. well casing **2.25** in.

N. I.D. well casing **2.05** in.



1. Cap and lock? Yes No

2. Protective cover pipe:
a. Inside diameter: **8** in.
b. Length: **1** ft.
c. Material: Steel 0 4
Other

d. Additional protection? Yes No
If yes, describe: **flushmount**

3. Surface seal:
Bentonite 3 0
Concrete 0 1
Other

4. Material between well casing and protective pipe:
Bentonite 3 0
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. _____ Ft³ 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. **#4000**
b. Volume added _____ ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. **#5**
b. Volume added _____ ft³

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 _____
c. Slot size: **0.010** in.
d. Slotted length: **15.0** ft.

11. Backfill material (below filter pack):
Slough None 1 4
Other

I hereby certify that the information on this form is true and correct to the best of my knowledge.
Signature *Paul [unclear]* Firm **The Sigma Group** Tel: 414-643-4200
1300 W Canal St Milwaukee, WI 53233 Fax: 414-643-4210

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.

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

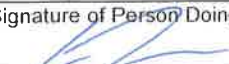
Waste Management Other: _____

1. Well Location Information				2. Facility / Owner Information			
County Milwaukee		WI Unique Well # of Removed Well WA095		Hicap # MW-5		Facility Name MSOE Dicrcks Computational Science Hall	
Latitude / Longitude (see instructions) _____ N _____ W		Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS) 2413A3A10	
1/4 NW 1/4 NW or Gov't Lot #		Section 28		Township 7 N		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W	
Well Street Address 1025 N. Milwaukee St.				Original Well Owner MSOE			
Well City, Village or Town Milwaukee				Well ZIP Code 53202			
Subdivision Name				Lot #		Mailing Address of Present Owner 1025 N. Broadway	
Reason for Removal from Service site construction				City of Present Owner Milwaukee			
WI Unique Well # of Replacement Well				State WI		ZIP Code 53202	

3. Filled & Sealed Well / Drillhole / Borehole Information				4. Pump, Liner, Screen, Casing & Sealing Material			
<input checked="" type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 02/27/2018		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach. <input checked="" type="checkbox"/>		Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Screen removed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Borehole / Drillhole				Casing left in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Was casing cut off below surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Construction Type:				Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Drilled		<input type="checkbox"/> Driven (Sandpoint)		<input type="checkbox"/> Dug		Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Other (specify): _____				If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Formation Type:				If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Unconsolidated Formation		<input type="checkbox"/> Bedrock		Required Method of Placing Sealing Material			
Total Well Depth From Ground Surface (ft.) 29.2		Casing Diameter (in.) 2		<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped			
Lower Drillhole Diameter (in.)		Casing Depth (ft.)		<input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____			
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown				Sealing Materials			
If yes, to what depth (feet)?		Depth to Water (feet) 19.48		<input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete			
				<input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips			
				For Monitoring Wells and Monitoring Well Boreholes Only:			
				<input checked="" type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout			
				<input type="checkbox"/> Granular Bentonite <input type="checkbox"/> 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
Surface	29.2	4.5 gallons	

6. Comments

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing The Sigma Group, Inc.		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 06/01/2018	Date Received	Noted By
Street or Route 1300 W. Canal Street		Telephone Number (414) 643-4200		Comments	
City Milwaukee	State WI	ZIP Code 53233	Signature of Person Doing Work 	Date Signed 06/01/2018	

Instructions

Well Filling and Sealing

Wisconsin Administrative Code (NR 811, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

General Instructions: Fill out Well/Drillhole/Borehole Filling & Sealing Report Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Verification Only of Fill and Seal: If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, including the date of Filling and Sealing or verification. It will be implied that you did do the filling and sealing work or the verification as stated in Part 7.

Route to: Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

(1) WELL LOCATION INFORMATION

WI Unique Well #: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

Hicap #: If this was a high capacity well, enter the number assigned to the well by the Department.

Well Location: Locate the well by Public Land Survey (Gov't Lot or $\frac{1}{4}$ $\frac{1}{4}$, $\frac{1}{4}$, Section, Township and Range) AND latitude and longitude coordinates, using GPS or on-line map locators.

Format Code: Check which format you are reporting in: DD = Decimal Degrees ____ . ____ ° or DDM = Degrees Decimal Minutes ____ ° ____ . ____ ' (Place decimal point appropriately).

Method Code: Check which method you are using to determine latitude/longitude: GPS008 = GPS Receiver; SCR002 = Online Map/Viewer; OTH001 = Other.

(2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility ID: Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

License/Permit/Monitoring #: Fill in number assigned to facility by the Department. If unknown, leave blank.

Present Well Owner: Fill in the name, address, city, state and ZIP code of the present owner.

(3) FILLED & SEALED WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format. This section should include information about the original well.

Depth to Water: Enter depth to water from ground surface.

- (4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

- (5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

- (6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

- (7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing or Verification: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed or verified filled & sealed.

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

Facility/Project Name Diercks Computational Science Hall	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <u>MW-5</u>
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. " ' " Long. " ' " or	Wis. Unique Well No. <u>WA095</u> DNR Well Number
Facility ID	St. Plane _____ ft. N. _____ ft. E. S/C/N	Date Well Installed <u>02/27/2018</u>
Type of Well Well Code <u>11/mw</u>	Section Location of Waste/Source NW 1/4 of NW 1/4 of Sec. <u>28</u> , T. <u>7</u> N, R. <u>22</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) <u>Adam Woerpel</u>
Distance from Waste/Source ft. _____	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Gov. Lot Number _____
Enf. Stds. Apply <input type="checkbox"/>		<u>GESTRA</u>

A. Protective pipe, top elevation _____ ft. MSL Yes No

B. Well casing, top elevation 626.21 ft. MSL

C. Land surface elevation 626.6 ft. MSL

D. Surface seal, bottom 614.6 ft. MSL or 12.0 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 626.6 ft. MSL or 0.0 ft.

F. Fine sand, top 614.6 ft. MSL or 12.0 ft.

G. Filter pack, top 613.6 ft. MSL or 13.0 ft.

H. Screen joint, top 623.6 ft. MSL or 3.0 ft.

I. Well bottom 597.6 ft. MSL or 29.0 ft.

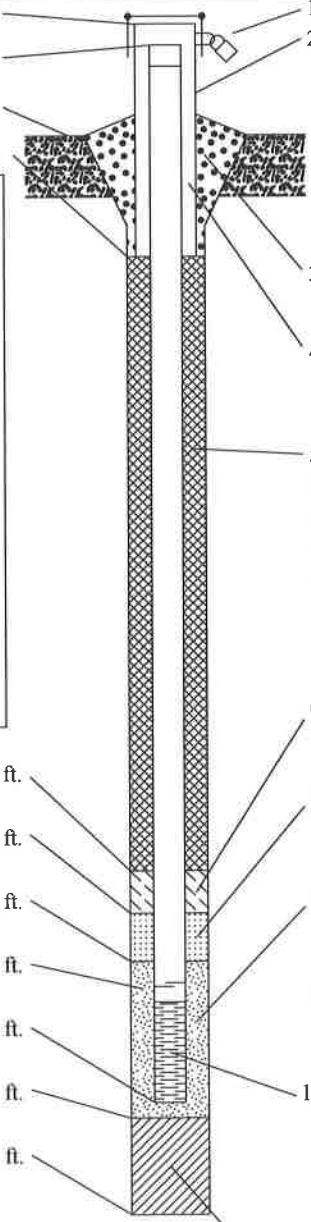
J. Filter pack, bottom 597.6 ft. MSL or 29.0 ft.

K. Borehole, bottom 597.6 ft. MSL or 29.0 ft.

L. Borehole, diameter 9.3 in.

M. O.D. well casing 2.25 in.

N. I.D. well casing 2.05 in.



1. Cap and lock? Yes No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel 0 4
Other

d. Additional protection? Yes No
If yes, describe: flushmount

3. Surface seal: Bentonite 3 0
Concrete 0 1
Other

4. Material between well casing and protective pipe: Bentonite 3 0
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. _____ Ft³ 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. #4000
b. Volume added _____ ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. #5
b. Volume added _____ ft³

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 _____
c. Slot size: 0.010 in.
d. Slotted length: 15.0 ft.

11. Backfill material (below filter pack): None 1 4
Slough Other

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

Signature [Signature] Firm The Sigma Group Tel: 414-643-4200
1300 W Canal St Milwaukee, WI 53233 Fax: 414-643-4210

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.