HYDE ENVIRONMENTAL, INC.

December 12, 2019

Trevor Bannister
Wisconsin DNR – R&R
3911 Fish Hatchery Road
Fitchburg, WI 53711

**Subject:** **Well Abandonment**
**John Deere Horicon Works – North Yard Vault,**
**300 North Vine Street, Horicon, Dodge County, WI**
**BRRTS # 02-14-537743**

Dear Mr. Bannister:

Please find attached the completed monitoring well abandonment forms for the John Deere Horicon Works - North Yard Vault incident in Horicon, WI. The monitoring wells were abandoned by Earth Solutions, Inc. and observed by Hyde Environmental, Inc. personnel on October 25, 2019. The wells were abandoned in accordance with s. NR 141.25, Wis. Adm. Code. The completed WDNR *Well / Drillhole / Boring Filling & Sealing Form 3300-005 (R 4/08)* for wells MW-1, MW-3, MW-4, MW-6 and MW-7, and a well construction log and boring log for MW-7, are attached. Wells MW-1, MW-3, MW-4 and MW-6 were installed by other consultants and we do not have that data. The former monitoring well locations relative to local landmarks are depicted in the attached figure.

It is our understanding that by completing this work the site is formally closed with no further actions.

If you have any questions, please contact me by phone at 262-250-1226 or by email at jclindemann@hyde-env.com.

Sincerely,

James C. Lindemann
Hydrogeologist

JCL/rbt/pss

Attachments

c: S. Schnepper – John Deere Horicon Works
M. Gotto – Deere & Co.

W175N11163 Stonewood Drive, Suite 110 • Germantown WI 53022-6501
Phone 262-250-1226 • Fax 262-317-9171

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

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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

☐ **Verification Only of Fill and Seal**

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

## 1. Well Location Information

| County | WI Unique Well # of Removed Well | Hicap # |
|---|---|---|
| Dodge | | |

Latitude / Longitude (see instructions): _____ N _____ W

Format Code: ☐ DD ☐ DDM

Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ SE | ¼ NW | Section | Township | Range ☐ E ☐ W |
|---|---|---|---|---|
| or Gov't Lot # | | 06 | 11 N | 16 |

Well Street Address: 300 N. Vine Street

Well City, Village or Town: Horicon

Well ZIP Code: 53032

Subdivision Name:

Lot #:

Reason for Removal from Service: Case closure

WI Unique Well # of Replacement Well: _____

## 2. Facility / Owner Information

Facility Name: John Deere Horicon Works North Yard Vault

Facility ID (FID or PWS): 02-14-537743 BRRTS

License/Permit/Monitoring #:

Original Well Owner: John Deere Horicon Works

Present Well Owner: John Deere Horicon Works

Mailing Address of Present Owner: 300 N. Vine Street

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Horicon | WI | 53032 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

■ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 07/09/2005

If a Well Construction Report is available, please attach.

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

Formation Type: ■ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): 13.05

Casing Diameter (in.): 2

Lower Drillhole Diameter (in.):

Casing Depth (ft.): 10

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

If yes, to what depth (feet)?

Depth to Water (feet)

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

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

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

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

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

## 5. Material Used to Fill Well / Drillhole

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| Bentonite chips | 13.05 | 0 | 1 bag | |
| In gravel | | | | |

## 6. Comments

MW-1

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| Earth Solutions | | 10/25/2019 |

Street or Route: 39W369 IL Rte 64

Telephone Number: (630 ) 443-0955

| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| St. Charles | IL | 60175 | Logan Cranley (oversight) | 11-13-19 |

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

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

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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

☐ **Verification Only of Fill and Seal**

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

## 1. Well Location Information

County: Dodge
WI Unique Well # of Removed Well: _ _ _ _ _
Hicap #:
Latitude / Longitude (see instructions): _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001
¼ / ¼ SE ¼ NW or Gov't Lot #:
Section: 06
Township: 11 N
Range: 16 ☐ E ☐ W
Well Street Address: 300 N. Vine Street
Well City, Village or Town: Horicon
Well ZIP Code: 53032
Subdivision Name:
Lot #:
Reason for Removal from Service: Case closure
WI Unique Well # of Replacement Well: _ _ _ _ _

## 2. Facility / Owner Information

Facility Name: John Deere Horicon Works North Yard Vault
Facility ID (FID or PWS): 02-14-537743 BRRTS
License/Permit/Monitoring #:
Original Well Owner: John Deere Horicon Works
Present Well Owner: John Deere Horicon Works
Mailing Address of Present Owner: 300 N. Vine Street
City of Present Owner: Horicon
State: WI
ZIP Code: 53032

## 3. Filled & Sealed Well / Drillhole / Borehole Information

■ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole
Original Construction Date (mm/dd/yyyy): 07/09/2005
If a Well Construction Report is available, please attach.
Construction Type: ■ Drilled ☐ Driven (Sandpoint) ☐ Dug ☐ Other (specify): Geoprobe
Formation Type: ■ Unconsolidated Formation ☐ Bedrock
Total Well Depth From Ground Surface (ft.): 12.1
Casing Diameter (in.): 2
Lower Drillhole Diameter (in.):
Casing Depth (ft.): 10
Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown
If yes, to what depth (feet)?
Depth to Water (feet)

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

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

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 |
|---|---|---|---|---|
| Bentonite chips | 12.1 | 0.5 | 1 bag | |
| Asphalt | 0.5 | 0 | 1.5 bags | |
| | | | | |

## 6. Comments

MW-3

## 7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: Earth Solutions
License #:
Date of Filling & Sealing or Verification (mm/dd/yyyy): 10/25/2019
Street or Route: 39W369 IL Rte 64
Telephone Number: (630 ) 443-0955
City: St. Charles
State: IL
ZIP Code: 60175
Signature of Person Doing Work: Logan Cranley (oversight)
Date Signed: 11-13-19

**DNR Use Only**
Date Received:
Noted By:
Comments:

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

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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

☐ **Verification Only of Fill and Seal**

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

## 1. Well Location Information

County: Dodge
WI Unique Well # of Removed Well: _ _ _ _ _
Hicap #:
Latitude / Longitude (see instructions): _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001
¼ / ¼ SE ¼ NW or Gov't Lot #:
Section: 06
Township: 11 N
Range: 16 ☐ E ☐ W
Well Street Address: 300 N. Vine Street
Well City, Village or Town: Horicon
Well ZIP Code: 53032
Subdivision Name:
Lot #:
Reason for Removal from Service: Case closure
WI Unique Well # of Replacement Well: _ _ _ _ _

## 2. Facility / Owner Information

Facility Name: John Deere Horicon Works North Yard Vault
Facility ID (FID or PWS): 02-14-537743 BRRTS
License/Permit/Monitoring #:
Original Well Owner: John Deere Horicon Works
Present Well Owner: John Deere Horicon Works
Mailing Address of Present Owner: 300 N. Vine Street
City of Present Owner: Horicon
State: WI
ZIP Code: 53032

## 3. Filled & Sealed Well / Drillhole / Borehole Information

■ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole
Original Construction Date (mm/dd/yyyy): 07/09/2005
If a Well Construction Report is available, please attach.
Construction Type: ■ Drilled ☐ Driven (Sandpoint) ☐ Dug ☐ Other (specify): Geoprobe
Formation Type: ■ Unconsolidated Formation ☐ Bedrock
Total Well Depth From Ground Surface (ft.): 12.70
Casing Diameter (in.): 2
Lower Drillhole Diameter (in.):
Casing Depth (ft.): 10
Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown
If yes, to what depth (feet)?:
Depth to Water (feet):

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

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

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 |
|---|---|---|---|---|
| Bentonite chips | 12.70 | 0.5 | 1 bag | |
| Concrete | 0.5 | 0 | 2 bags | |

## 6. Comments

MW-4

## 7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: Earth Solutions
License #:
Date of Filling & Sealing or Verification (mm/dd/yyyy): 10/25/2019
Street or Route: 39W369 IL Rte 64
Telephone Number: (630) 443-0955
City: St. Charles
State: IL
ZIP Code: 60175
Signature of Person Doing Work: Logan Cranley (oversight)
Date Signed: 11-13-19

**DNR Use Only**
Date Received:
Noted By:
Comments:

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

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

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

## 1. Well Location Information

County: Dodge
WI Unique Well # of Removed Well: _ _ _ _ _
Hicap #:

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

¼ / ¼ SE ¼ NW or Gov't Lot #
Section: 06
Township: 11 N
Range: 16 ☐ E ☐ W

Well Street Address: 300 N. Vine Street
Well City, Village or Town: Horicon
Well ZIP Code: 53032
Subdivision Name:
Lot #:

Reason for Removal from Service: Case closure
WI Unique Well # of Replacement Well: _ _ _ _ _

## 2. Facility / Owner Information

Facility Name: John Deere Horicon Works North Yard Vault
Facility ID (FID or PWS): 02-14-537743 BRRTS
License/Permit/Monitoring #:
Original Well Owner: John Deere Horicon Works
Present Well Owner: John Deere Horicon Works
Mailing Address of Present Owner: 300 N. Vine Street
City of Present Owner: Horicon
State: WI
ZIP Code: 53032

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☒ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole
Original Construction Date (mm/dd/yyyy): 02/04/2010
If a Well Construction Report is available, please attach.

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

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): 12.70
Casing Diameter (in.): 2
Lower Drillhole Diameter (in.):
Casing Depth (ft.): 10

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

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

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

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

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

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

## 5. Material Used to Fill Well / Drillhole

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| Bentonite chips | 12.70 | 0.5 | 1.5 bags | |
| Asphalt | 0.5 | 0 | 2 bags | |

## 6. Comments

MW-6

## 7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: Earth Solutions
License #:
Date of Filling & Sealing or Verification (mm/dd/yyyy): 10/25/2019
Street or Route: 39W369 IL Rte 64
Telephone Number: (630) 443-0955
City: St. Charles
State: IL
ZIP Code: 60175
Signature of Person Doing Work: Logan Cranley (oversight)
Date Signed: 11-13-19

**DNR Use Only**
Date Received:
Noted By:
Comments:

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

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

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☐ **Verification Only of Fill and Seal**

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

## 1. Well Location Information

| County | WI Unique Well # of Removed Well | Hicap # |
|---|---|---|
| Dodge | | |

Latitude / Longitude (see instructions): _____ N _____ W

Format Code: ☐ DD ☐ DDM

Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

| ¼ / ¼ SE | ¼ NW | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # | | 06 | 11 N | 16 ■ E ☐ W |

Well Street Address: 300 N. Vine Street

Well City, Village or Town: Horicon

Well ZIP Code: 53032

Subdivision Name:

Lot #:

Reason for Removal from Service: Case closure

WI Unique Well # of Replacement Well:

## 2. Facility / Owner Information

Facility Name: John Deere Horicon Works North Yard Vault

Facility ID (FID or PWS): 02-14-537743 BRRTS

License/Permit/Monitoring #:

Original Well Owner: John Deere Horicon Works

Present Well Owner: John Deere Horicon Works

Mailing Address of Present Owner: 300 N. Vine Street

| City of Present Owner | State | ZIP Code |
|---|---|---|
| Horicon | WI | 53032 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

■ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 10/08/2015

If a Well Construction Report is available, please attach.

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

Formation Type: ■ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.): 14

Casing Diameter (in.): 2

Lower Drillhole Diameter (in.):

Casing Depth (ft.): 10

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

If yes, to what depth (feet)?

Depth to Water (feet)

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

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

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 |
|---|---|---|---|---|
| Bentonite chips | 14 | 0.5 | 1 bag | |
| Asphalt | 0.5 | 0 | 1.5 bags | |

## 6. Comments

MW-7

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) | DNR Use Only: Date Received | Noted By |
|---|---|---|---|---|
| Earth Solutions | | 10/25/2019 | | |

| Street or Route | Telephone Number | DNR Use Only: Comments |
|---|---|---|
| 39W369 IL Rte 64 | (630 ) 443-0955 | |

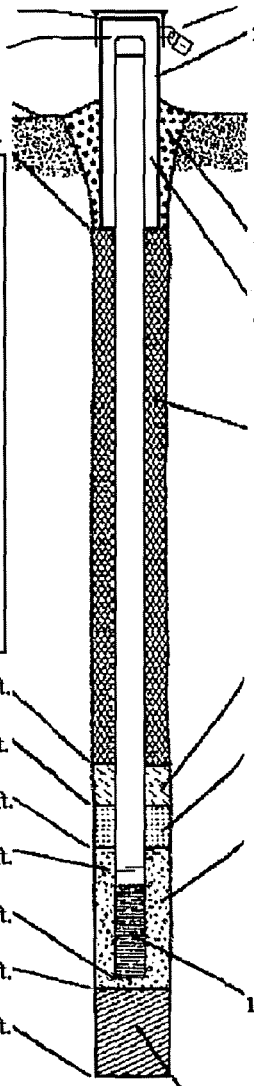
| City | State | ZIP Code | Signature of Person Doing Work | Date Signed |
|---|---|---|---|---|
| St. Charles | IL | 60175 | Logan Cranley (oversight) | 11-13-19 |

State of Wisconsin
Department of Natural Resources

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

# MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

| | | |
|---|---|---|
| Facility/Project Name: John Deere Horicon North Yard Vault | Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W. | Well Name: MW-7 |
| Facility License, Permit or Monitoring No. | Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ___° ___' ___" Long. ___° ___' ___" or | Wis. Unique Well No. ___ / DNR Well ID No. ___ |
| Facility ID ___ | St. Plane ____ ft. N, ____ ft. E. S/C/N | Date Well Installed: 10 / 08 / 2015 (m m d d y y y y) |
| Type of Well: Well Code 11 / MW | Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. 6, T. 11 N, R. 16 ☑ E ☐ W | Well Installed By: Name (first, last) and Firm: Jorjito Luna, Earth Solutions, Inc. |
| Distance from Waste/Source 60 ft. / Enf. Stds. Apply ☐ | Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☑ Downgradient n ☐ Not Known | Gov. Lot Number ___ |



A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or ____ ft.

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

13. Sieve analysis performed? ☐ Yes ☑ No

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

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

16. Drilling additives used? ☐ Yes ☐ No

Describe ____

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

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

F. Fine sand, top ____ ft. MSL or 3 ft.

G. Filter pack, top ____ ft. MSL or ____ ft.

H. Screen joint, top ____ ft. MSL or 4 ft.

I. Well bottom ____ ft. MSL or ____ ft.

J. Filter pack, bottom ____ ft. MSL or ____ ft.

K. Borehole, bottom ____ ft. MSL or 14 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2 in.

N. I.D. well casing 2 in.

1. Cap and lock? ☑ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 12 in.
b. Length: 1 ft.
c. Material: Steel ☑ 04 Other ☐ ____
d. Additional protection? ☐ Yes ☑ No
If yes, describe: ____

3. Surface seal: Bentonite ☐ 30 Concrete ☑ 01 Other ☐ ____

4. Material between well casing and protective pipe: Bentonite ☐ 30 Other ☑ Concrete

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. NA
b. Volume added 0.5 $ft^3$

8. Filter pack material: Manufacturer, product name & mesh size
a. NA
b. Volume added 1 $ft^3$

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

10. Screen material: PVC
a. Screen type: Factory cut ☑ 11 Continuous slot ☐ 01 Other ☐ ____
b. Manufacturer NA
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.

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

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

Signature: Robert B. Hyde

Firm: Hyde Environmental, Inc.

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

State of Wisconsin
Department of Natural Resources

# SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment [x] Other ☐ _____



| Facility/Project Name | License/Permit/Monitoring Number | Boring Number |
|---|---|---|
| John Deere Horicon North Yard Vault | | MW-7 |

| Boring Drilled By: Name of crew chief (first, last) and Firm | Date Drilling Started | Date Drilling Completed | Drilling Method |
|---|---|---|---|
| First Name: Bob Last Name: Thomson<br>Firm: Hyde Environmental, Inc. | 10 / 08 / 2015 (m m / d d / y y y y) | 10 / 08 / 2015 (m m / d d / y y y y) | Geoprobe |

| WI Unique Well No. | DNR Well ID No. | Well Name | Final Static Water Level | Surface Elevation | Borehole Diameter |
|---|---|---|---|---|---|
| _ _ _ _ _ _ | _ _ _ | | _____ Feet MSL | _____ Feet MSL | 3 inches |

Local Grid Origin [x] (estimated: [x] ) or Boring Location ☐
State Plane _____ N, _____ E
____ 1/4 of ____ 1/4 of Section 6, T 11 N, R 16 E

Lat ___ ° ___ ' ___ "
Long ___ ° ___ ' ___ "

Local Grid Location
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

| Facility ID | County | County Code | Civil Town/City/ or Village |
|---|---|---|---|
| | DODGE | 14 | Horicon |

| Sample Number and Type | Length Att. & Recovered (in) | Blow Counts | Depth in Feet (Below ground surface) | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Compressive Strength | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0.0 - 0.5 Asphalt | PA | | | | | | | | | |
| | | | 1 | 0.5 - 1.5 Silt, sand with gravel, fill, brown | ML | | | | | | | | | |
| | | | | 1.5 - 2.0 Sand, brown, fine to medium, some silt | SM | | | 0.4 | | | | | | |
| | | | 2 | 2.0 - 4.5 | SM | | | 0.7 | | | | | | |
| | | | 3 | | | | | | | | | | | |
| | | | 4 | | | | | | | | | | | |
| 1 | 60/36 | | | 4.5 - 5.0 Sand, black, foundry sand | SP | | | | | | | | | |
| | | | 5 | 5.0 - 6.0 Sand, fine to coarse, grey, wet, odorless | SP | | | 8.6 | | | | | | |
| | | | 6 | 6.0 - 7.5 | SP | | | | | | | | | |
| | | | 7 | | | | | | | | | | | |
| | | | | 7.5 - 8.0 Silty sand, fine, grey, wet, hint of petroleum odor at 7.5 ft. | ML | | | 5.7 | | | | | | |
| 2 | 60/36 | | 8 | 8.0 - 10.0 | ML | | | 5.9 | | | | | | |
| | | | 9 | | | | | | | | | | | |
| | | | 10 | 10.0 - 12.0 | ML | | | 2.6 | | | | | | |
| | | | 11 | | | | | | | | | | | |
| | | | 12 | | | | | | | | | | | |

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

| Signature | Firm |
|---|---|
| Robert B. Thomson P.G. | Hyde Environmental, Inc. |

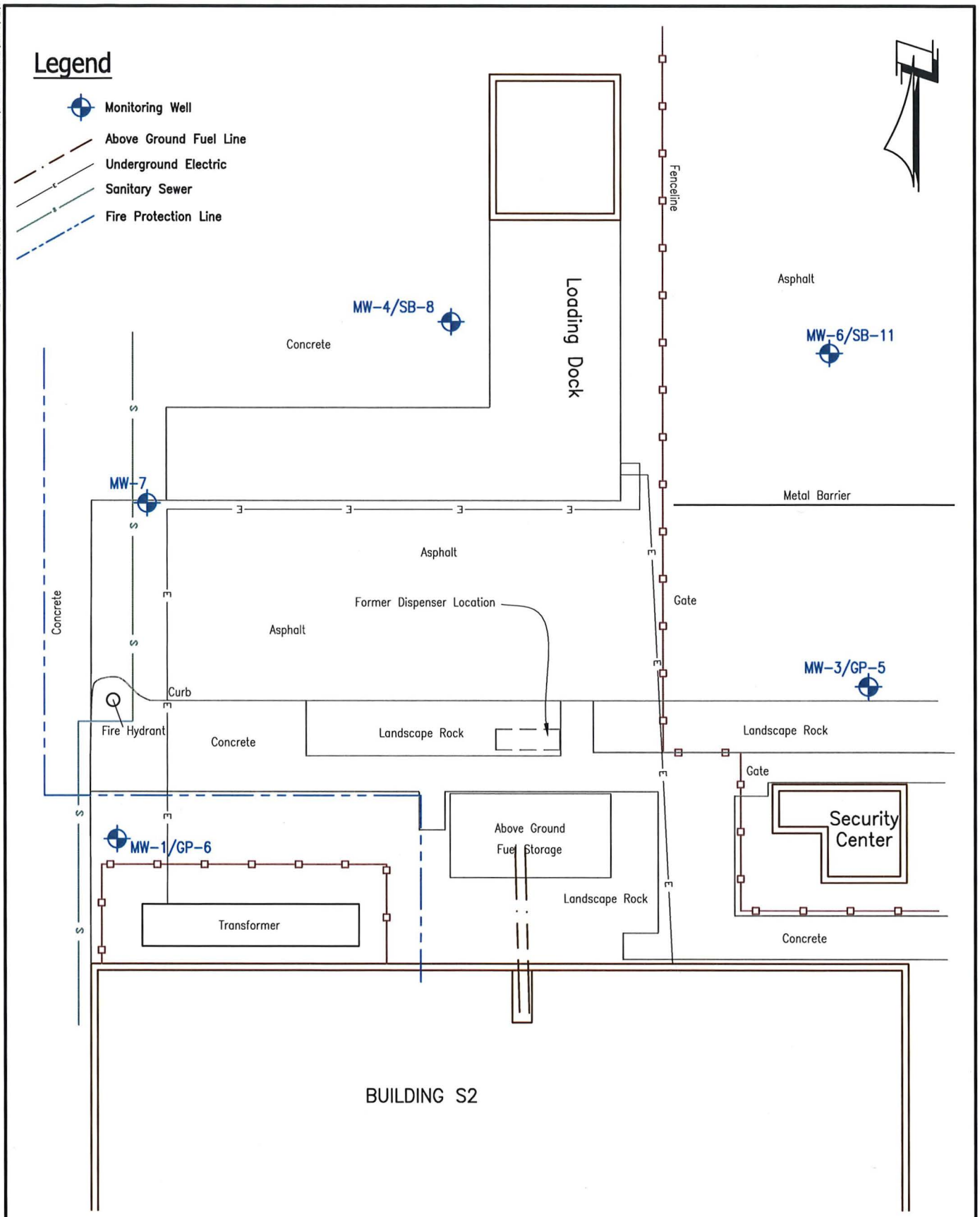
This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally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

Facility/Project Name: John Deere Horicon North Yard Vault
Boring No. : MW-7

License/Project/Monitoring No. :
WI Unique Well No. :



| Sample | | | | | | | | | | Soil Properties | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number and Type | Length Att. & Recovered (in.) | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | U S C S | Graphic Log | Well Diagram | PID/FID | Compressive Strength | Moisture Content | Liquid Limit | Plasticity Index | P 200 | RQD/ Comments |
| | | | 11 | | | | | | | | | | | |
| 3 | 60/30 | | 12 | 12.0 - 13.0 | ML | | | 17.4 | | | | | | |
| | | | 13 | 13.0 - 14.0 Well set at 14 ft. 2" well with 10 ft screen, flush mount with bold-down cover. Sand to 3ft; bentonite to top. 18" concrete pad. | ML | | | | | | | | | |
| | | | 14 | | | | | | | | | | | |




0 20'
SCALE

HYDE ENVIRONMENTAL, INC.

## B.1.b. DETAILED SITE MAP

JOHN DEERE HORICON WORKS – North Yard Vault
Horicon, Wisconsin

C:\Pwa\0-HYDE\JD-Horicon North Yard\Horicon N Vault.dwg Modified: Apr 15, 2019 5:20pm Updated by: RW