

From: Dillon Plamann <DPlamann@fehr-graham.com>
Sent: Wednesday, May 12, 2021 10:50 AM
To: Schultz, Josie M - DNR
Cc: Matt Dahlem; Donald P. Gallo
Subject: RE: Bay Towel (BRRTS #02-05-237064) - Post-Excavation Groundwater Sample Results, February/March 2021
Attachments: WDNR Well Construction AND Development Form MW-15.pdf; WDNR Well Construction AND Development Form MW-17.pdf; WDNR Well Construction AND Development Form PZ-3R.pdf; WDNR Well Construction AND Development Form PZ-5.pdf; WDNR Well Construction AND Development Form SMW-1R.pdf; WDNR Well Construction AND Development Form SMW-3R.pdf; WDNR Well Construction Form MW-2RR.pdf; WDNR Well Construction Form MW-16.pdf; WDNR Well Construction AND Development Form MW-14.pdf

Hi Josie,

Thank you for the response. Please see attached monitoring well construction forms and development forms for the new wells that were installed in January 2021. Monitoring wells MW-2RR and MW-16 have been dry every time we have been on site, and have not been developed yet. But they will be developed prior to collecting any groundwater samples.

We will also add SMW-3R to the list of wells we will sample for PFAS per your suggestion, and plan to complete the PFAS sampling in the near future.

Thank you!

DILLON PLAMANN | Project Hydrogeologist
Fehr Graham | Engineering & Environmental

909 North 8th Street, Suite 101
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P: 920.453.0700
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From: Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>
Sent: Wednesday, May 12, 2021 8:51 AM
To: Dillon Plamann <DPlamann@fehr-graham.com>
Cc: Matt Dahlem <mdahlem@fehr-graham.com>; Donald P. Gallo <DGallo@axley.com>
Subject: RE: Bay Towel (BRRTS #02-05-237064) - Post-Excavation Groundwater Sample Results, February/March 2021

Hi Dillon,

I've taken a look at the post-excavation groundwater sampling results and changes to the PFAS sampling scope. Could you please also submit the monitoring well construction and development forms for the new wells?

The only comment I have for the PFAS sampling scope is that you originally proposed sampling MW-3R as well, and you may want to consider adding this back into the scope.

With these comments, you can accept this as my notice to proceed with PFAS sampling.

Thanks,
Josie

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Josie M. Schultz

Hydrogeologist – Northeast Region Remediation and Redevelopment Team

Wisconsin Department of Natural Resources

2984 Shawano Avenue, Green Bay, WI 54313-6727

Cell: 920-366-5685

Josie.Schultz@Wisconsin.gov



dnr.wi.gov



From: Dillon Plamann <DPlamann@fehr-graham.com>

Sent: Thursday, May 6, 2021 8:40 AM

To: Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>

Cc: Matt Dahlem <mdahlem@fehr-graham.com>; Donald P. Gallo <DGallo@axley.com>

Subject: Bay Towel (BRRTS #02-05-237064) - Post-Excavation Groundwater Sample Results, February/March 2021

Good morning Josie,

This morning I am submitting the first round of post-excavation groundwater sampling results for Bay Towel (BRRTS #02-05-237064) to the RR Submittal Portal using Form 4400-249. Included with the submittal will be an updated map with sample locations, a data table comparing results to state standards, and copies of the laboratory results.

In addition, I am also seeking guidance prior to collecting the groundwater samples for the PFAS site investigation that was approved by WDNR. Please see the attached PFAS Sampling Work Plan from February 2020 for reference.

The wells originally approved for PFAS sampling (SMW-1, MW-2R, and MW-3R) required abandonment during the June 2020 – December 2020 remedial excavation to avoid damaging or destroying the wells during the excavation activities. In January 2021, nine (9) new wells were installed at the site, including replacement wells for SMW-1, MW-2R, and MW-3R.

Based on the locations of the new wells installed at the site and the results from the first round of post-excavation groundwater sampling, we are suggesting four (4) new wells to be sampled for the PFAS site investigation. The following provides details on the selected wells:

- SMW-1R (installed in January 2021) – replaced originally approved well (SMW-1), source well, currently second highest concentration of PCE.
- MW-5R – downgradient from source area, and screened at the water table.
- MW-15 (installed in January 2021) – near originally approved well (MW-2R), source well, currently highest concentration of PCE.
- PZ-1 – nested with MW-5R, downgradient from source area, screened at same interval as MW-15.

At your convenience, please review the data and the provided project details and give me a call when you are available to discuss to the new PFAS groundwater sampling locations. We are in the process of completing the Remedial Action Documentation report, but if there is any other information you need please let me know.

Thank you!

DILLON PLAMANN | Project Hydrogeologist
Fehr Graham | Engineering & Environmental

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Facility/Project Name Bay Towel - Solvent Investigation		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-14	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 22 / 2021 m m d d y y y y	
Type of Well Well Code 12 / PZ		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
- 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

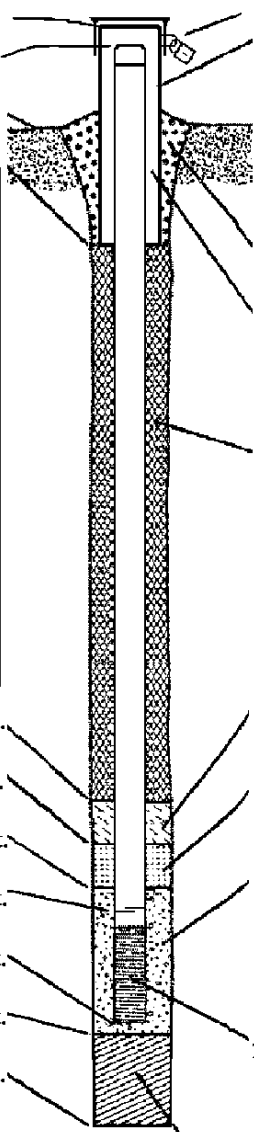
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Other

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 0.5 ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or 19 ft.
- H. Screen joint, top _____ ft. MSL or 20 ft.
- I. Well bottom _____ ft. MSL or 25 ft.
- J. Filter pack, bottom _____ ft. MSL or 25 ft.
- K. Borehole, bottom _____ ft. MSL or 25 ft.
- L. Borehole, diameter 4.25 in.
- M. O.D. well casing 2.375 in.
- N. I.D. well casing 2.067 in.

- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ in. 8
 - b. Length: _____ ft. 1
 - 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
- 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. _____ Ft³ 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. _____
b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
a. Red Flint #40
b. Volume added 1.5 ft³
- 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: Environmental Manufacturing Inc.
c. Slot size: 0.010 in.
d. Slotted length: 5 ft.
- 11. Backfill material (below filter pack): None 14
Other

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

Signature *D.M. J. P.* Firm Fehr Graham

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.

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

Facility/Project Name Bay Towel-Solvent Investigation	County Name Brown	Well Name MW-14	
Facility License, Permit or Monitoring Number 02-05-237064	County Code 05	Wis. Unique Well Number _____	DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____ _____

3. Time spent developing well _____ 30 _____ min.

4. Depth of well (from top of well casing) _____ 25.4 _____ ft.

5. Inside diameter of well _____ 2.07 _____ in.

6. Volume of water in filter pack and well casing _____ 3.5 _____ gal.

7. Volume of water removed from well _____ 4.9 _____ gal.

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

9. Source of water added _____ N/A _____

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

N/A

17. Additional comments on development:

11. Depth to Water Before Development After Development

(from top of well casing) a. _____ 17 _____ 24 _____ ft. _____ DRY _____ ft.

Date b. 03 / 15 / 2021 _____ 03 / 15 / 2021 _____
m m d d y y y y m m d d y y y y

Time c. _____ 2 _____ : _____ 10 _____ a.m. _____ 3 _____ : _____ 18 _____ p.m. _____ a.m. _____ p.m.

12. Sediment in well _____ . _____ inches _____ . _____ inches
bottom

13. Water clarity Clear 1 0 Clear 2 0
Turbid 1 5 Turbid 2 5
(Describe) (Describe)

High	Low
_____	_____
_____	_____
_____	_____

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

14. Total suspended _____ . _____ mg/l _____ . _____ mg/l
solids

15. COD _____ . _____ mg/l _____ . _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: KELSEY Last Name: BIRD

Firm: FEHR GRAHAM

Name and Address of Facility Contact /Owner/Responsible Party

First Name: John Last Name: Butz

Facility/Firm: Bay Towel

Street: 2580 S. Broadway

City/State/Zip: Green Bay, WI 54307

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

Signature: 

Print Name: Kelsey Bird

Firm: FEHR GRAHAM

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		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-15	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 26 / 2021 m m d d y y y y	
Type of Well Well Code 12 / PZ		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
- 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

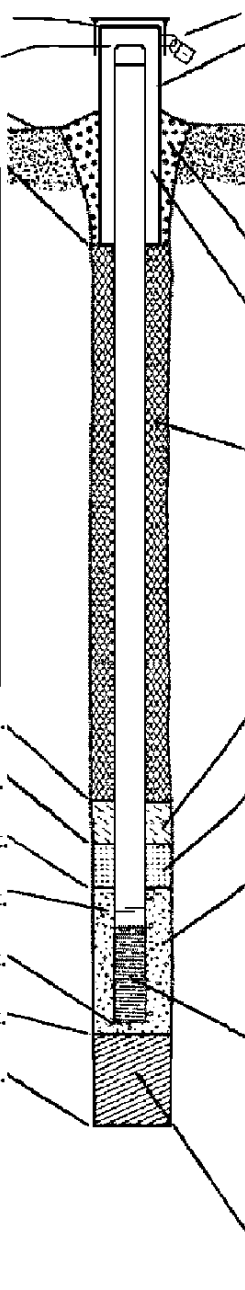
14. Drilling method used: Rotary 5 0
 Hollow Stem Auger 4 1
 Other

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):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ in.
 - b. Length: _____ ft.
 - c. Material: Steel 0 4
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite 3 0
Concrete 0 1
Other
- 4. Material between well casing and protective pipe: Bentonite 3 0
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. _____
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. **Red Flint #40**
 b. Volume added **2** 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: **Environmental Manufacturing Inc.**
- c. Slot size: **0.010** in.
- d. Slotted length: **10** ft.
- 11. Backfill material (below filter pack): None 1 4
Red Flint #40 Other

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

Signature *D.M. J. P.* Firm **Fehr Graham**

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.

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

Facility/Project Name Bay Towel-Solvent Investigation	County Name Brown	Well Name MW-15	
Facility License, Permit or Monitoring Number 02-05-237064	County Code 05	Wis. Unique Well Number _____	DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____ _____

3. Time spent developing well _____ 35 _____ min.

4. Depth of well (from top of well casing) _____ 29.50 _____ ft.

5. Inside diameter of well _____ 2.07 _____ in.

6. Volume of water in filter pack and well casing _____ 3.7 _____ gal.

7. Volume of water removed from well _____ 18.5 _____ gal.

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

9. Source of water added _____ N/A _____

10. Analysis performed on water added? Yes No
(If yes, attach results) _____
N/A

17. Additional comments on development:

11. Depth to Water Before Development After Development

(from top of well casing) a. 20.92 ft. DRY ft.

Date b. 02/03/2021 02/03/2021
m m d d y y y y m m d d y y y y

Time c. 1:55 a.m. 2:30 p.m. a.m. p.m.

12. Sediment in well bottom 0.0 inches 0.0 inches

13. Water clarity Clear 1 0 Clear 2 0
Turbid 1 5 Turbid 2 5
(Describe) (Describe)

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

14. Total suspended _____ mg/l _____ mg/l
solids

15. COD _____ mg/l _____ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: JENNA Last Name: WILLIAMS
Firm: FEHR GRAHAM

Name and Address of Facility Contact/Owner/Responsible Party

First Name: John Last Name: Butz

Facility/Firm: Bay Towel

Street: 2580 S. Broadway

City/State/Zip: Green Bay, WI 54307

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

Signature: 

Print Name: Jenna Williams

Firm: FEHR GRAHAM

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		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-17	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 25 / 20 21 m m d d y y v y	
Type of Well Well Code 12 / PZ		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
- 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

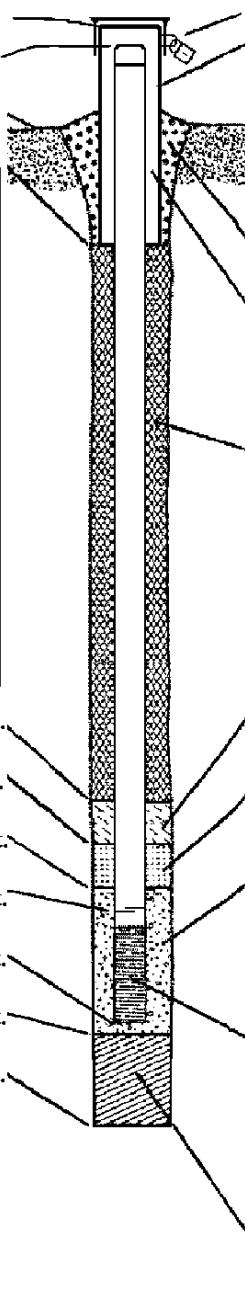
13. Sieve analysis performed? Yes No

14. Drilling method used: Rotary 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):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ in.
 - b. Length: _____ ft.
 - c. Material: Steel 0 4
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite 3 0
Concrete 0 1
Other
- 4. Material between well casing and protective pipe: Bentonite 3 0
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. _____
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. **Red Flint #40**
 b. Volume added **3** 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: **Environmental Manufacturing Inc.**
- c. Slot size: **0.010** in.
- d. Slotted length: **10** ft.
- 11. Backfill material (below filter pack): None 1 4
 Other

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

Signature *DMJPh* Firm **Fehr Graham**

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.

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

Facility/Project Name Bay Towel-Solvent Investigation	County Name Brown	Well Name MW-17	
Facility License, Permit or Monitoring Number 02-05-237064	County Code 05	Wis. Unique Well Number _____	DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____ _____

3. Time spent developing well _____ 30 _____ min.

4. Depth of well (from top of well casing) _____ 30.5 _____ ft.

5. Inside diameter of well _____ 2 . 07 _____ in.

6. Volume of water in filter pack and well casing _____ 4 . 9 _____ gal.

7. Volume of water removed from well _____ 24 . 5 _____ gal.

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

9. Source of water added _____ N/A _____

10. Analysis performed on water added? Yes No
(If yes, attach results) _____ N/A _____

17. Additional comments on development:

11. Depth to Water Before Development After Development

(from top of well casing) a. _____ 19 . 09 _____ ft. _____ DRY _____ ft.

Date b. 02 / 25 / 2021 02 / 25 / 2021
m m d d y y y y m m d d y y y y

Time c. _____ 4 _____ : _____ 00 a.m. _____ 4 _____ : _____ 30 p.m. _____ 4 _____ : _____ 30 p.m.

12. Sediment in well _____ . _____ inches _____ . _____ inches
bottom

13. Water clarity Clear 1 0 Clear 2 0
Turbid 1 5 Turbid 2 5
(Describe) (Describe)

_____ Low _____

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

14. Total suspended _____ . _____ mg/l _____ . _____ mg/l
solids

15. COD _____ . _____ mg/l _____ . _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: Jenna Last Name: Williams

Firm: FEHR GRAHAM

Name and Address of Facility Contact /Owner/Responsible Party
First Name: John Last Name: Butz
Facility/Firm: Bay Towel
Street: 2580 S. Broadway
City/State/Zip: Green Bay, WI 54307

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

Signature: 

Print Name: Jenna Williams

Firm: FEHR GRAHAM

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name PZ-3R	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. 44°50'85.614" Long. -88°01'79.112" or		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 22 / 2021 m m d d y y y y	
Type of Well Well Code 12 / PZ		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
- 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

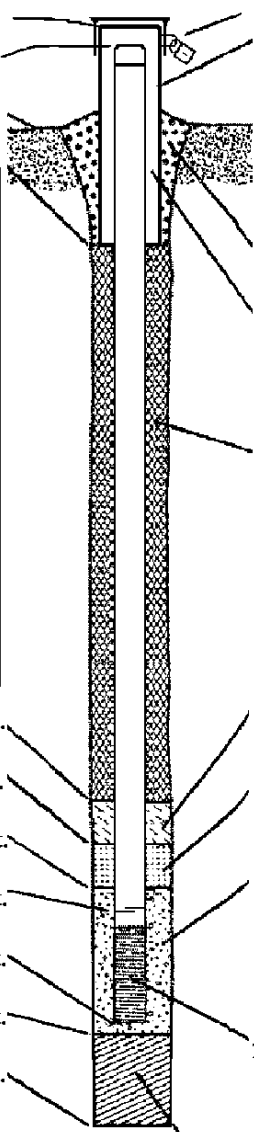
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Other

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):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ in.
 - b. Length: _____ 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
- 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. _____ Ft³ 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. _____
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. **Red Flint #40**
 b. Volume added **1.5** ft³
- 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: **Environmental Manufacturing Inc.**
 c. Slot size: **0.010** in.
 d. Slotted length: **5** ft.
- 11. Backfill material (below filter pack): None 14
 Other

- E. Bentonite seal, top _____ ft. MSL or **0.5** ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or **24** ft.
- H. Screen joint, top _____ ft. MSL or **25** ft.
- I. Well bottom _____ ft. MSL or **30** ft.
- J. Filter pack, bottom _____ ft. MSL or **30** ft.
- K. Borehole, bottom _____ ft. MSL or **30** ft.
- L. Borehole, diameter **4.25** in.
- M. O.D. well casing **2.375** in.
- N. I.D. well casing **2.067** in.

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

Signature _____ Firm **Fehr Graham**

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.

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

Facility/Project Name Bay Towel - Solvent Investigation	County Name Brown	Well Name PZ-3R
Facility License, Permit or Monitoring Number 02-05-237064	County Code 05	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____

3. Time spent developing well 32 min.

4. Depth of well (from top of well casing) 30.40 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 7.9 gal.

7. Volume of water removed from well 39.4 gal.

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

9. Source of water added N/A

10. Analysis performed on water added? Yes No
(If yes, attach results) N/A

17. Additional comments on development:

11. Depth to Water Before Development After Development

a. 11.94 ft. DRY ft.

Date b. 02/03/2021 02/03/2021
m m d d y y y y m m d d y y y y

Time c. 10:35 a.m. 11:07 a.m.
 p.m. p.m.

12. Sediment in well bottom 0.0 inches 0.0 inches

13. Water clarity Clear 1 0 Clear 2 0
Turbid 1 5 Turbid 2 5
(Describe) (Describe)

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

14. Total suspended solids _____ mg/l _____ mg/l

15. COD _____ mg/l _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: JENNA Last Name: WILLIAMS

Firm: FEHR GRAHAM

Name and Address of Facility Contact/Owner/Responsible Party

First Name: John Last Name: Butz

Facility/Firm: Bay Towel

Street: 2580 S. Broadway

City/State/Zip: Green Bay, WI 54307

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

Signature: 

Print Name: Jenna Williams

Firm: FEHR GRAHAM

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

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Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

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Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
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- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name PZ-5	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 21 / 2002 m m d d y y y y	
Type of Well Well Code 12 / PZ		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
- 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

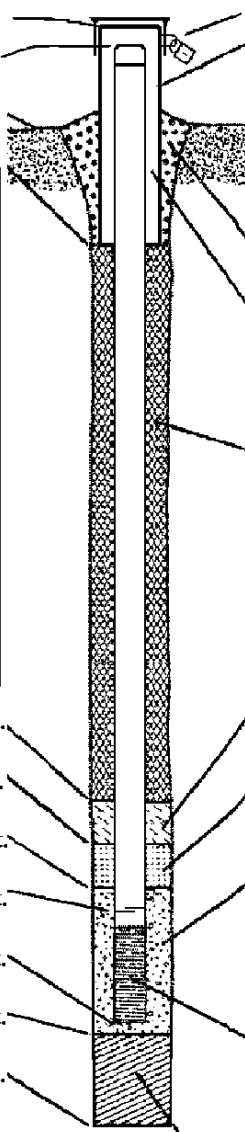
14. Drilling method used: Rotary 5 0
 Hollow Stem Auger 4 1
 Other

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): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ in.
 - b. Length: _____ ft.
 - c. Material: Steel 0 4
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite 3 0
Concrete 0 1
Other
- 4. Material between well casing and protective pipe: Bentonite 3 0
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. _____
b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
a. **Red Flint #40**
b. Volume added **2** 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: **Environmental Manufacturing Inc.**
- c. Slot size: **0.010** in.
- d. Slotted length: **5** ft.
- 11. Backfill material (below filter pack): None 1 4
Other

- E. Bentonite seal, top _____ ft. MSL or **0.5** ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or **33** ft.
- H. Screen joint, top _____ ft. MSL or **35** ft.
- I. Well bottom _____ ft. MSL or **40** ft.
- J. Filter pack, bottom _____ ft. MSL or **40** ft.
- K. Borehole, bottom _____ ft. MSL or **40** ft.
- L. Borehole, diameter **4.25** in.
- M. O.D. well casing **2.375** in.
- N. I.D. well casing **2.067** in.

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

Signature *DMJPh* Firm **Fehr Graham**

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.

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

Facility/Project Name Bay Towel- Solvent Investigation	County Name Brown	Well Name PZ-5	
Facility License, Permit or Monitoring Number 02-05-237064	County Code 05	Wis. Unique Well Number _____	DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method

surged with bailer and bailed	<input type="checkbox"/>	4 1
surged with bailer and pumped	<input type="checkbox"/>	6 1
surged with block and bailed	<input type="checkbox"/>	4 2
surged with block and pumped	<input type="checkbox"/>	6 2
surged with block, bailed and pumped	<input type="checkbox"/>	7 0
compressed air	<input type="checkbox"/>	2 0
bailed only	<input type="checkbox"/>	1 0
pumped only	<input type="checkbox"/>	5 1
pumped slowly	<input checked="" type="checkbox"/>	5 0
Other _____	<input type="checkbox"/>	_____

3. Time spent developing well _____ 30 _____ min.

4. Depth of well (from top of well casing) _____ 38.2 _____ ft.

5. Inside diameter of well _____ 2.07 _____ in.

6. Volume of water in filter pack and well casing _____ 7.3 _____ gal.

7. Volume of water removed from well _____ 36.7 _____ gal.

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

9. Source of water added _____ N/A _____

10. Analysis performed on water added? Yes No
(If yes, attach results) _____ N/A _____

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. _____ 21.00 _____ ft.	_____ DRY _____ ft.
Date	b. <u>02</u> / <u>03</u> / <u>2021</u> m m d d y y y y	<u>02</u> / <u>03</u> / <u>2021</u> m m d d y y y y
Time	c. <u>3</u> : <u>15</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>3</u> : <u>45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	_____ inches	_____ inches
13. Water clarity	Clear <input checked="" type="checkbox"/> 1 0	Clear <input type="checkbox"/> 2 0
	Turbid <input checked="" type="checkbox"/> 1 5	Turbid <input checked="" type="checkbox"/> 2 5
	(Describe) _____	(Describe) _____
	_____	_____
	_____	_____
	_____	_____
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____ mg/l	_____ mg/l
15. COD	_____ mg/l	_____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: JENNA Last Name: WILLIAMS

Firm: FEHR GRAHAM

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party


First Name: John Last Name: Butz

Facility/Firm: Bay Towel

Street: 2580 S. Broadway

City/State/Zip: Green Bay, WI 54307

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

Signature: 

Print Name: Jenna Williams

Firm: FEHR GRAHAM

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

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name SMW-1R	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 21 / 2002 m m d d y y y y	
Type of Well Well Code 12 / PZ		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
- 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

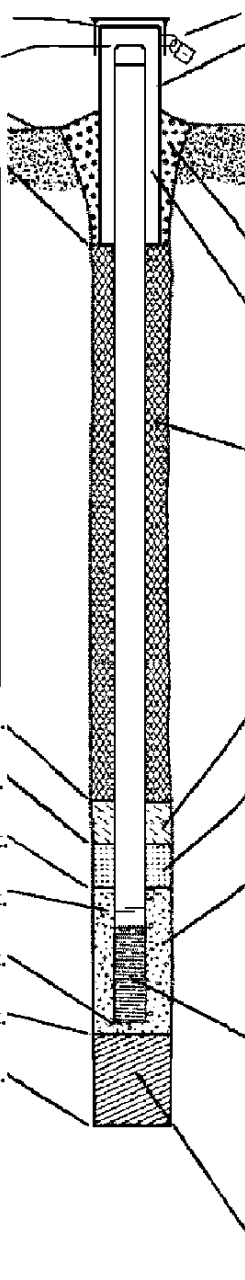
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Other

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): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ in.
 - b. Length: _____ 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
- 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. _____ Ft³ 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. _____
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. **Red Flint #40**
 b. Volume added **0.75** ft³
- 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: **Environmental Manufacturing Inc.**
 c. Slot size: **0.010** in.
 d. Slotted length: **5** ft.
- 11. Backfill material (below filter pack): None 14
 Other

- E. Bentonite seal, top _____ ft. MSL or **0.5** ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or **19** ft.
- H. Screen joint, top _____ ft. MSL or **20** ft.
- I. Well bottom _____ ft. MSL or **25** ft.
- J. Filter pack, bottom _____ ft. MSL or **25** ft.
- K. Borehole, bottom _____ ft. MSL or **25** ft.
- L. Borehole, diameter **4.25** in.
- M. O.D. well casing **2.375** in.
- N. I.D. well casing **2.067** in.

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

Signature *DMJ* Firm **Fehr Graham**

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.

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

Facility/Project Name Bay Towel- Solvent Investigation	County Name Brown	Well Name SMW-1R	
Facility License, Permit or Monitoring Number 02-05-237064	County Code 05	Wis. Unique Well Number _____	DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____ _____

3. Time spent developing well _____ 30 _____ min.

4. Depth of well (from top of well casing) _____ 24.4 _____ ft.

5. Inside diameter of well _____ 2.07 _____ in.

6. Volume of water in filter pack and well casing _____ 2.04 _____ gal.

7. Volume of water removed from well _____ 20.4 _____ gal.

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

9. Source of water added _____ N/A _____

10. Analysis performed on water added? Yes No
(If yes, attach results) _____ N/A _____

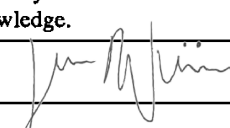
17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. _____ 19.60 _____ ft.	_____ DRY _____ ft.
Date	b. <u>02</u> / <u>03</u> / <u>2021</u>	<u>02</u> / <u>03</u> / <u>2021</u>
	m m d d y y y y	m m d d y y y y
Time	c. _____ 4 : 00 <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	_____ 4 : 30 <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	_____ 0.0 _____ inches	_____ 0.0 _____ inches
13. Water clarity	Clear <input checked="" type="checkbox"/> 1 0 Turbid <input type="checkbox"/> 1 5 (Describe) _____	Clear <input checked="" type="checkbox"/> 2 0 Turbid <input type="checkbox"/> 2 5 (Describe) _____
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____ mg/l	_____ mg/l
15. COD	_____ mg/l	_____ mg/l

16. Well developed by: Name (first, last) and Firm
 First Name: JENNA Last Name: WILLIAMS
 Firm: FEHR GRAHAM

Name and Address of Facility Contact /Owner/Responsible Party
 First Name: John Last Name: Butz
 Facility/Firm: Bay Towel
 Street: 2580 S. Broadway
 City/State/Zip: Green Bay, WI 54307

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

Signature: 
 Print Name: Jenna Williams
 Firm: FEHR GRAHAM

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

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name SMW-3R	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 21 / 2002 m m d d y y y y	
Type of Well Well Code 11 / MW		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
- 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

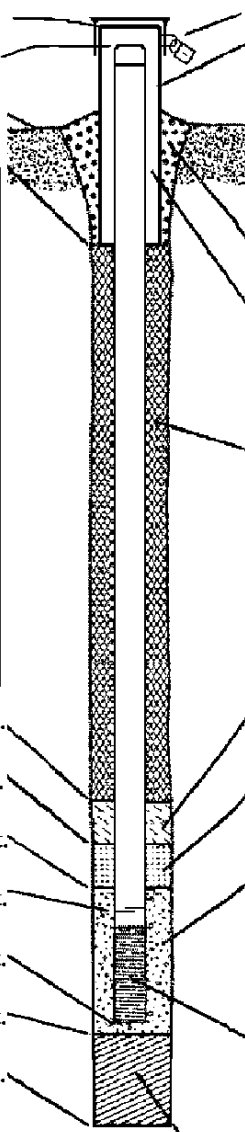
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Other

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): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ 8 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
- 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. _____ Ft³ 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. _____
b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
a. **Red Flint #40**
b. Volume added **3.25** ft³
- 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: **Environmental Manufacturing Inc.**
- c. Slot size: **0.010** in.
- d. Slotted length: **10** ft.
- 11. Backfill material (below filter pack): None 14
Other

- E. Bentonite seal, top _____ ft. MSL or **0.5** ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or **4** ft.
- H. Screen joint, top _____ ft. MSL or **5** ft.
- I. Well bottom _____ ft. MSL or **15** ft.
- J. Filter pack, bottom _____ ft. MSL or **15** ft.
- K. Borehole, bottom _____ ft. MSL or **15** ft.
- L. Borehole, diameter **4.25** in.
- M. O.D. well casing **2.375** in.
- N. I.D. well casing **2.067** in.

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

Signature *DMJ* Firm **Fehr Graham**

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.

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

Facility/Project Name Bay Towel-Solvent Investigation	County Name Brown	Well Name SMW-3R	
Facility License, Permit or Monitoring Number 02-05-237064	County Code 05	Wis. Unique Well Number _____	DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____ _____

3. Time spent developing well 30 min.

4. Depth of well (from top of well casing) 15.42 ft.

5. Inside diameter of well 2.07 in.

6. Volume of water in filter pack and well casing 4.1 gal.

7. Volume of water removed from well 20.2 gal.

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

9. Source of water added N/A

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

N/A

17. Additional comments on development:

11. Depth to Water Before Development After Development

(from top of well casing) a. 5.92 ft. DRY ft.

Date b. 02 / 03 / 2021 02 / 03 / 2021
m m d d y y y y m m d d y y y y

Time c. 11 : 20 a.m. 11 : 50 a.m.
 p.m. p.m.

12. Sediment in well bottom _____ inches _____ inches

13. Water clarity Clear 1 0 Clear 2 0
Turbid 1 5 Turbid 2 5
(Describe) (Describe)

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

14. Total suspended _____ mg/l _____ mg/l
solids

15. COD _____ mg/l _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: JENNA Last Name: WILLIAMS

Firm: FEHR GRAHAM

Name and Address of Facility Contact /Owner/Responsible Party

First Name: John Last Name: Butz

Facility/Firm: Bay Towel

Street: 2580 S. Broadway

City/State/Zip: Green Bay, WI 54307

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

Signature: 

Print Name: Jenna Williams

Firm: FEHR GRAHAM

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		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-16	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 01 / 25 / 2021 m m d d y y y y	
Type of Well Well Code 12 / PZ		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Kurt Deprey Intertek PSI	
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
 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

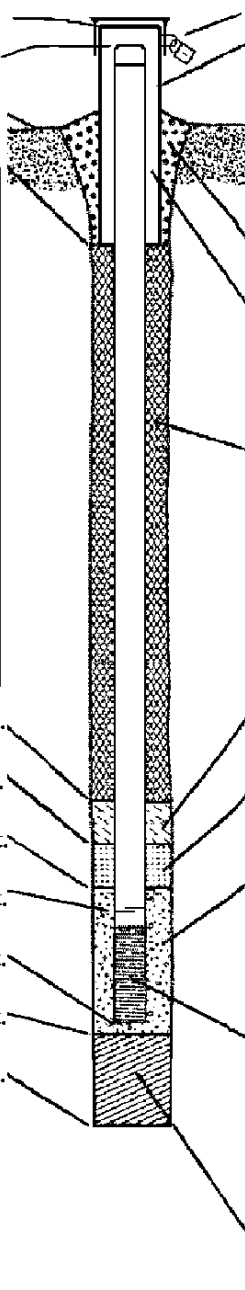
13. Sieve analysis performed? Yes No

14. Drilling method used: Rotary 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):



1. Cap and lock? Yes No

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

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

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

8. Filter pack material: Manufacturer, product name & mesh size
 a. **Red Flint #40**
 b. Volume added **2** 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: **Environmental Manufacturing Inc.**
 c. Slot size: **0.010** in.
 d. Slotted length: **5** ft.

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

E. Bentonite seal, top _____ ft. MSL or **0.5** ft.
 F. Fine sand, top _____ ft. MSL or _____ ft.
 G. Filter pack, top _____ ft. MSL or **19** ft.
 H. Screen joint, top _____ ft. MSL or **20** ft.
 I. Well bottom _____ ft. MSL or **25** ft.
 J. Filter pack, bottom _____ ft. MSL or **25** ft.
 K. Borehole, bottom _____ ft. MSL or **25** ft.
 L. Borehole, diameter **4.25** in.
 M. O.D. well casing **2.375** in.
 N. I.D. well casing **2.067** in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.
 Signature _____ Firm **Fehr Graham**

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.

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

Facility/Project Name	County Name	Well Name	
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____ _____

3. Time spent developing well _____ min.

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

5. Inside diameter of well _____ in.

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

7. Volume of water removed from well _____ gal.

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

9. Source of water added _____

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

17. Additional comments on development:

11. Depth to Water Before Development After Development

(from top of well casing) a. _____ ft. _____ ft.

Date b. ____/____/____ ____/____/____
m m d d y y y y m m d d y y y y

Time c. ____:____ a.m. p.m. ____:____ a.m. p.m.

12. Sediment in well _____ inches _____ inches
bottom

13. Water clarity Clear 1 0 Clear 2 0
Turbid 1 5 Turbid 2 5
(Describe) (Describe)

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

14. Total suspended _____ mg/l _____ mg/l
solids

15. COD _____ mg/l _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: _____ Last Name: _____

Firm: _____

Name and Address of Facility Contact /Owner/Responsible Party
First Last
Name: _____ Name: _____

Facility/Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: _____

Firm: _____

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.

Facility/Project Name Bay Towel - Solvent Investigation		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-2RR	
Facility License, Permit or Monitoring No. 02-05-237064		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 405044090		St. Plane _____ ft. N, _____ ft. E. S/C/N		Date Well Installed 12 / 22 / 2020 m m d d y y y y	
Type of Well Well Code 11 / MW		Section Location of Waste/Source NW 1/4 of SE 1/4 of Sec. 36, T. 24 N, R. 20 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm Dillon Plamann Fehr Graham	
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
- 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

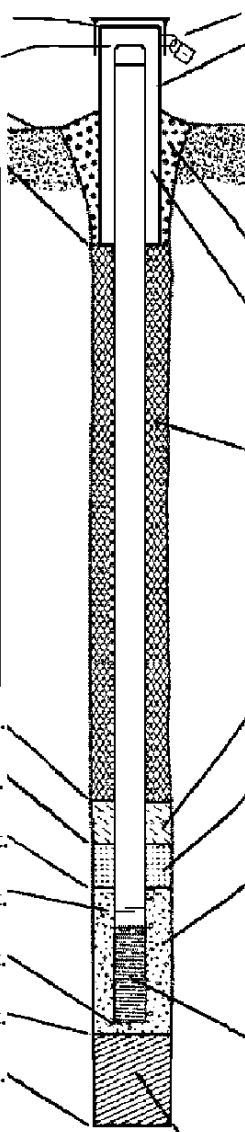
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
Dug with Excavator Other

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):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____ in. **8**
 - b. Length: _____ ft. **1**
 - 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
- 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. _____ Ft³ 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. _____
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. **RW Sidley 10/20 Coarse**
 b. Volume added **50 lbs** ft³
- 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: **Monoflex**
- c. Slot size: **0.010** in.
- d. Slotted length: **10** ft.
- 11. Backfill material (below filter pack): None 14
 Other

- E. Bentonite seal, top _____ ft. MSL or **0.5** ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or **1.5** ft.
- H. Screen joint, top _____ ft. MSL or **2** ft.
- I. Well bottom _____ ft. MSL or **12** ft.
- J. Filter pack, bottom _____ ft. MSL or **12** ft.
- K. Borehole, bottom _____ ft. MSL or **12** ft.
- L. Borehole, diameter **N/A** in.
- M. O.D. well casing **2.375** in.
- N. I.D. well casing **2.067** in.

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

Signature _____ Firm **Fehr Graham**

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.

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

Facility/Project Name	County Name	Well Name	
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number

1. Can this well be purged dry? Yes No

2. Well development method
- surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____ _____

3. Time spent developing well _____ min.

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

5. Inside diameter of well _____ in.

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

7. Volume of water removed from well _____ gal.

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

9. Source of water added _____

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

17. Additional comments on development:

11. Depth to Water Before Development After Development

(from top of well casing) a. _____ ft. _____ ft.

Date b. ____/____/____ ____/____/____
m m d d y y y y m m d d y y y y

Time c. ____:____ a.m. p.m. ____:____ a.m. p.m.

12. Sediment in well _____ inches _____ inches
bottom

13. Water clarity Clear 1 0 Clear 2 0
Turbid 1 5 Turbid 2 5
(Describe) (Describe)

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

14. Total suspended _____ mg/l _____ mg/l
solids

15. COD _____ mg/l _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: _____ Last Name: _____

Firm: _____

Name and Address of Facility Contact /Owner/Responsible Party
First Last
Name: _____ Name: _____

Facility/Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: _____

Firm: _____

**State of Wisconsin
Department of Natural Resources**

**INSTRUCTIONS
Monitoring Well Construction Form 4400-113A**

General Instructions: Fill out both a monitoring well construction form (4400-113A) and a monitoring well development form (4400-113B) for each well installed. 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.)

Routing: Return these forms to the project manager or plan reviewer for the DNR program who required the well installation. If the project manager/plan reviewer is in the Regional Office, send the original forms to the Regional Office and a copy to the Central Office in Madison. If the project manager/plan reviewer is in the Central Office, send the original forms there and a copy to the Regional Office. If your project does not have a project manager or plan reviewer or you don't know who it is, send the forms to the appropriate program in the Central Office. The addresses of the DNR offices are provided on the attached map.

Check the appropriate routing box at the top of the forms to assure proper routing once the forms reach DNR.

Time-saving tip: When filling out many forms at once, you can save time by using a photocopier. Fill out one form (the "original") with any information that is the same for all wells, such as facility name, section location, grid origin location, drilling method and well casing type. Photocopy both sides of the "original", making as many copies as there are wells. On the separate copies, fill in the details that are unique for each well.

TOP LEFT

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License, Permit, or Monitoring Number: Fill in number assigned to facility by the Department. If unknown, leave blank.

Facility ID: Fill in the nine digit Facility ID (FID) assigned to the site.

Type of Well: Record the type of well code (number/initials) from the following list:

- 11/mw Water table observation well (monitoring well screen intersecting the water table) (non Subtitle D well)
- 12/pz Piezometer (monitoring well with screen sealed below the water table) (non Subtitle D well)
- 17/gc Gradient control
- 18/at Aquifer test
- 24/lh Leachate head well
- 26/ew Groundwater extraction well
- 27/he Horizontal groundwater extraction well
- 28/hw Horizontal monitoring well
- 29/ha Horizontal vapor extraction well
- 51/gp Gas probe
- 53/ge Gas extraction well
- 57/sv Soil venting wells (includes both soil vapor extraction and bioventing, includes both extraction and unsaturated zone gas phase injection wells installed in soil or fill, but not refuse)
- 61/ij Injection well (injection of liquids not gases)
- 62/as In situ air sparging well (injection well to inject gases into the aquifer)
- 63/uv Unterdruck Verdampfer Brunnen (UVB) wells (sparging wells where the gases remain in the well and are not injected into the aquifer)
- 64/le Groundwater and light non-aqueous phase liquid (LNAPL) extraction wells
- 65/de Groundwater and dense non-aqueous phase liquid (DNAPL) extraction wells
- 66/ve Vacuum enhanced groundwater extraction wells
- 67/vi Vacuum enhanced groundwater and LNAPL extraction wells
- 68/vd Vacuum enhanced groundwater and DNAPL extraction wells
- 71/dw Subtitle D water table observation well (see 11/mw above)
- 72/dp Subtitle D piezometer (see 12/pz above)
- 99/Ot Other

Distance From Waste/Source: Enter distance in feet from the monitoring well to the edge of a facility waste storage or discharge structure, e.g., from the edge of a wastewater lagoon or the approved waste fill boundary for a landfill. For a contaminant source which is not a facility, e.g., a spill, enter the distance the well is from the contaminant source.

Enf. Stds. Apply: Check this box only if enforcement standards apply at this well. Enforcement standards apply at any well beyond the Design Management Zone or the property boundary of the facility or at a water supply well. For spills, enforcement standards apply at every point at which groundwater is monitored. (For more information, see s. NR 140.22, Wis. Adm. Code.)

TOP CENTER

Local Grid Location: The location of the well to the nearest foot, in relation to the grid origin established for the site. If the exact location of the well is given in State Plane Coordinates, then leave these fields blank.

Local Grid Origin or Well Location: Check the appropriate box behind the Local Grid Origin or the Well Location text. Locate the grid origin at a permanent feature near the waste or source of contamination. Give the location in State Plane Coordinates or Latitude and Longitude in degrees, minutes and seconds (using 1927 North American Datum). If State Plane Coordinates are used, circle the appropriate letter for south, central or north zone. Alternately, an acceptable method for providing this information without surveying is to locate the Grid Origin on a USGS 7.5 minute quadrangle map. The Location of the Grid Origin can then be interpolated (estimated) using standard cartographic techniques. If the Grid Origin location is estimated, check the estimated box.

The Well Location can be determined directly by surveying or by Global Positioning System (GPS) (with processing to be accurate within 1 foot and reported with precision to hundredths of a second). If the exact location of the well is given in State Plane Coordinates, then leave the Local Grid Location fields blank.

Section Location of Waste/Source: Fill in the quarter quarter and quarter section, section, township, range and range direction of the waste or source.

Location of Well Relative to Waste/Source: Check the box which describes the location of the well in the groundwater flow system relative to the disposal site, spill, etc. If groundwater flow directions are unknown, check "not known."

Gov. Lot Number: Provide the government lot number for the property if applicable. (Government lot numbers are the legal description of a tract of land adjacent to a lake or stream where a proper quarter or quarter quarter section corner could not be established.)

TOP RIGHT

Well Name: Fill in common well name, such as B-II, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) on this form. In addition, attach the WUWN tag to the inside of the protective cover pipe and record that number on the Soil Boring Log Information form 4400-122 and Monitoring Well Development form 4400-113B. WUWN tags are available from the DNR Central or Regional Offices.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

Date Well Installed: List Month/Day/Year (mm/dd/yyyy) the well was installed.

Well Installed By: Fill in name (first and last) and firm of the person who supervised the drilling. The person must be a hydrogeologist, a drilling crew chief or experienced engineering technician.

LEFT SIDE

Numerical Specifications: Fill in data for letters A through N which refer to design elements on the figure on the form. Letters A, B and C must be reported as elevations in feet above mean sea level (MSL), surveyed to the nearest 0.01 foot. Letters D through K may be either elevation above MSL or depth below land surface, accurate to the nearest 0.1 foot.

- A. **Protective pipe, top elevation.** With cap off. Referenced to Mean Sea Level (MSL).
- B. **Well casing, top elevation.** With cap off. Referenced to MSL.
- C. **Land surface elevation.** Referenced to MSL.
- D. **Surface seal, bottom.** Fill in elevation, MSL or depth below land surface.
- E. **Bentonite seal, top.** MSL or depth below land surface. (See NR 141.13(1) to determine if this seal is required)
- F. **Fine sand, top.** MSL or depth below land surface. Cross out if not installed.

- G. **Filter pack, top.** MSL or depth below land surface.
- H. **Screen joint, top.** MSL or depth below land surface. (Top of the entire screen section, NOT the top slot)
- L. **Well bottom.** MSL or depth below land surface.
- J. **Filter pack, bottom.** MSL or depth below land surface.
- K. **Borehole, bottom.** MSL or depth below land surface.
- L. **Borehole, diameter:** Diameter to nearest 0.1 inch.
- M. **O.D. well casing:** Outside diameter to nearest 0.01 inch.
- N. **I.D. well casing:** Inside diameter to nearest 0.01 inch.

LEFT CENTER INSERT (BOX)

- 12. **USCS classification of soil near screen:** Check boxes for all soil types (or bedrock) found at the depths spanned by the well screen, using the Unified Soil Classification System symbols. Refer to the native soil near the screen, not to the filter pack material.
- 13. **Sieve analysis performed?:** Check box. A sieve analysis for soil near the screen is required for all wells.
- 14. **Drilling method used:** Choose from among the choices on the form or check "Other" and write in one of the choices below:

Reverse rotary	Solid stem auger	Cable tool	Driven point
Vibratory	Casing hammer	Wash boring	
- 15. **Drilling fluid used:** Check appropriate box or boxes.
- 16. **Drilling additives used:** Check box. If yes, describe.
- 17. **Source of water:** Cite source(s) of any water used to drill the well OR to hydrate dry bentonite OR to mix annular space sealant. Cite exact source so that a sample of the water can be obtained later, if necessary. If the well is at a solid waste facility, attach an analysis of the water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT SIDE

- 1. **Cap and Lock:** Check box.
- 2. **Protective pipe:** Provide the information below.
 - a. **Inside diameter:** Give to nearest 0.1 inch.
 - b. **Length:** Give to nearest 0.1 foot
 - c. **Material:** Check box. If "Other", describe.
 - d. **Additional protection?:** Check box. If 'Yes', describe.
- 3. **Surface seal:** Check box for the material used to prevent surface water from entering the borehole. If "Other," describe.
- 4. **Material between well casing and protective pipe:** Check box. If "Other", describe.
- 5. **Annular space seal:** Check boxes for both materials used and how installed, and fill in volume used.

Material: If dry bentonite, list source of water used for hydration on line #17. For wells installed at a solid waste site, attach an analysis of water (see s. NR 507.06(1), Wis. Adm. Code.) For other choices, fill in pounds per gallon mud weight or percent bentonite as appropriate.

- e. **Volume:** Fill in volume used in cubic feet.
- f. **How installed:** Check box for how the annular space seal was installed. If dropped from the land surface, check "Gravity."

6. **Bentonite seal:** If bentonite pellets were used, also check the pellet diameter. If material installed was the same as the annular space seal, or if no filter pack seal was installed, write "none."
7. **Fine sand material:** Fine sand is used to prevent migration of annular space seal material into the filter pack.
 - a. Indicate manufacturer, product name, and mesh size.
 - b. Indicate volume added.
8. **Filter pack material:** General description of filter pack material, e.g., "430 grit sand," and name of filter pack manufacturer, product name or number, and volume added. Attach grain size analysis of filter pack and state quantity used.
9. **Well casing:** Check box for PVC type. If "Other", describe. Examples of "Other" include stainless steel, steel, and Teflon ©.
10. **Screen material:** If same as well casing, write "same."
 - a. **Screen type:** Check box. If "Other", describe the design.
 - b. **Manufacturer:** List name of manufacturer.
 - c. **Slot size:** Give width of slot in thousandths (0.001) of an inch.
 - d. **Slotted length:** Give distance from top slot to bottom slot to nearest 0.1 foot.
11. **Backfill material:** Check "None" or, if "Other", describe any backfill installed below the filter pack.

FAR BOTTOM

"I hereby certify that the information on this form is true and correct to the best of my knowledge.": Sign the form and indicate name of firm.

MONITORING WELL DEVELOPMENT FORM 4400-113B

TOP TWO LINES

Facility/Project Name: Fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility License Permit, or Monitoring Number: Enter number assigned to facility by the DNR. If unknown, leave blank.

County Name: Fill in the name of the county in which the well is installed.

County Code: Fill in the two digit county code number.

1. Adams	16. Douglas	31. Kewaunee	46. Ozaukee	61. Taylor
2. Ashland	17. Dunn	32. La Crosse	47. Pepin	62. Trempealeau
3. Barron	18. Eau Claire	33. Lafayette	48. Pierce	63. Vernon
4. Bayfield	19. Florence	34. Langlade	49. Polk	64. Vilas
5. Brown	20. Fond Du Lac	35. Lincoln	50. Portage	65. Walworth
6. Buffalo	21. Forest	36. Manitowoc	51. Price	66. Washburn
7. Burnett	22. Grant	37. Marathon	52. Racine	67. Washington
8. Calumet	23. Green	38. Marinette	53. Richland	68. Waukesha
9. Chippewa	24. Green Lake	39. Marquette	54. Rock	69. Waupaca
10. Clark	25. Iowa	40. Menominee	55. Rusk	70. Waushara
11. Columbia	26. Iron	41. Milwaukee	56. St. Croix	71. Winnebago
12. Crawford	27. Jackson	42. Monroe	57. Sauk	72. Wood
13. Dane	28. Jefferson	43. Oconto	58. Sawyer	
14. Dodge	29. Juneau	44. Oneida	59. Shawano	
15. Door	30. Kenosha	45. Outagamie	60. Sheboygan	

Well Name: Fill in common well name, such as P-11, OW-13A, or MW-5R. (Use the suffix "R" for a replacement well.)

Wis. Unique Well Number: Record the Wisconsin Unique Well Number assigned to the well.

DNR Well ID Number: The 3 digit number assigned to the well by the Department.

LEFT COLUMN

1. **Can this well be purged dry?** Check whether well can or cannot be purged dry (all water removed).
2. **Well development method:** Check appropriate box. If "Other", describe. Note that a well shall be surged and purged for a minimum of 30 minutes.
3. **Time spent developing well:** In minutes.
4. **Depth of well:** In tenths (0.1) of feet, from top of well casing.
5. **Inside diameter of well:** In hundredths (0.01) of inches.
6. **Volume of water in filter pack and well casing:** In tenths (0.1) of gallons.
7. **Volume of water removed from well:** In tenths (0.1) of gallons.
8. **Volume of water added, if any:** In tenths (0.1) of gallons.
9. **Source of water added:** Cite exact source so that a sample of the water can be obtained later, if necessary.
10. **Analysis performed on water added?** Check appropriate box. If well is installed at a solid waste facility, attach analysis of water according to s. NR 507.06(1), Wis. Adm. Code.

RIGHT COLUMN

11. **Depth to water:**
 - a. Enter distance from top of well casing to water level in well, in hundredths (0.01) of a foot, both before and after development.
 - b. **Date:** Enter month/day/year (mm/dd/yyyy) development began and ended.
 - c. **Time:** Enter according to a twelve hour clock the time development began and ended.
12. **Sediment in well bottom:** Compute to tenths (0.1) of inches, both before and after development.
13. **Water clarity:** Check box and describe.
14. **Total suspended solids:** Total Suspended Solids, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
15. **COD:** Chemical oxygen demand, as determined by a certified or registered analytical laboratory. Required only for wells near solid waste facilities when drilling fluids were used.
16. **Well developed by:** Enter the name (first and last) and firm of the person who supervised the development This person must be a hydrogeologist, the drilling crew chief, or an experienced engineering technician.

BOTTOM SECTION

17. **Additional comments on development:** Describe any of the above in more detail or add information such as the relative recovery rates of wells or the amount of drilling fluid lost to the formation and the amount of water removed to account for lost drilling fluid. For example, if 150 gallons of drilling water were, lost, you should remove the volume of water in the filter pack and well casing plus 150 gallons as part of development.

Name and Address of Facility/Owner/Responsible Party Contact: Enter a contact name (first and last), or a firm name or facility name, street address, city, state, and zip code of the facility or site.

Signature, Print Name, and Firm: Signature and printed name of the person filling out the form and name of firm for which the person works.