



ENVIRONMENTAL TROUBLESHOOTERS, INC.

3825 GRAND AVENUE  
DULUTH, MN 55807  
TEL: (218) 722-6013  
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TOLL FREE: 1-800-470-3536

August 30, 2021

Mr. Grant Neitzel, Hydrogeologist  
Wisconsin Department of Natural Resources  
Northern Region  
Remediation and Redevelopment  
1701 N 4th St, Superior, WI 54880

**Re: Remaining Actions Needed for Case Closure - WAC chs. NR 700-754  
Fraser Shipyards – Punch Shed Building  
1 Clough Avenue, Superior, Wisconsin  
DNR BRRTS Activity #02-16-562899  
ET Project No. 14-1004**

Dear Mr. Neitzel,

Pursuant to the letter from Mr. Saari dated July 16, 2021, Environmental Troubleshooters (ET) has prepared this submittal. The two items requested are discussed below.

**Remaining Actions Needed**

Monitoring Well or Remedial System Piping Filling and Sealing

Site monitoring wells have been properly filled and sealed in accordance with Wis. Admin. Code ch. NR 141. Documentation of filling and sealing for all wells and boreholes is attached.

Purge Water, Waste and/or Soil Pile Removal

All purge water, solid waste and/or contaminated soil piles generated as part of site investigation or remediation activities were removed from the site concurrently with site investigation and remediation activities.

If you have any questions, please contact me at (218) 722-6013 or by email at [jmccarthy@etsmn.com](mailto:jmccarthy@etsmn.com).

Sincerely,  
**Environmental Troubleshooters, Inc.**

A handwritten signature in blue ink, appearing to read "James", is written over a white background.

Attachments: Form 4400-005 for Monitoring Wells PS-MW-1 through PS-MW-4

Cc: Mr. Dave Steininger, Fraser Shipyards, 1 Clough Ave., Superior, WI 54880

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

Verification Only of Fill and Seal

Route to DNR Bureau:

Drinking Water

Watershed/Wastewater

Remediation/Redevelopment

Waste Management

Other: \_\_\_\_\_

**1. Well Location Information**

County <u>Douglas</u>	WI Unique Well # of Removed Well <u>VT 908</u>	Hicap #
Latitude / Longitude (see instructions) <u>46° 44' 09.30</u> N <u>-92° 05' 22.86</u> W	Format Code <input type="checkbox"/> DD <input checked="" type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input checked="" type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
1/4 / 1/4 <u>SE/SW</u> 1/4 <u>SW</u> or Gov't Lot #	Section <u>11</u>	Township <u>49</u> N
Well Street Address <u>1 Clough Ave</u>	Range <u>14</u> E <input checked="" type="checkbox"/> W	Well ZIP Code <u>54880</u>
Well City, Village or Town <u>Superior</u>	Subdivision Name	Lot #
Reason for Removal from Service <u>Project Complete</u>	WI Unique Well # of Replacement Well	

**2. Facility / Owner Information**

Facility Name <u>Fraser Shipyard</u>		
Facility ID (FID or PWS)		
License/Permit/Monitoring #		
Original Well Owner		
Present Well Owner		
Mailing Address of Present Owner <u>1 Clough Ave</u>		
City of Present Owner <u>Superior</u>	State <u>WI</u>	ZIP Code <u>54880</u>

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

<input checked="" type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) <u>04/15/2016</u>
<input type="checkbox"/> Water Well	If a Well Construction Report is available, please attach.
<input type="checkbox"/> Borehole / Drillhole	
Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____	
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock	
Total Well Depth From Ground Surface (ft.) <u>13.5'</u>	Casing Diameter (in.) <u>2"</u>
Lower Drillhole Diameter (in.)	Casing Depth (ft.)
Was well annular space grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
If yes, to what depth (feet)? <u>13.5'</u>	Depth to Water (feet) <u>6.14'</u>

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

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Casing left in place?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input checked="" type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____	
Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips	
For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input checked="" type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry	

**5. Material Used to Fill Well / Drillhole**

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	<u>13.5'</u>	<u>1/8</u>	

**6. Comments**

**7. Supervision of Work**

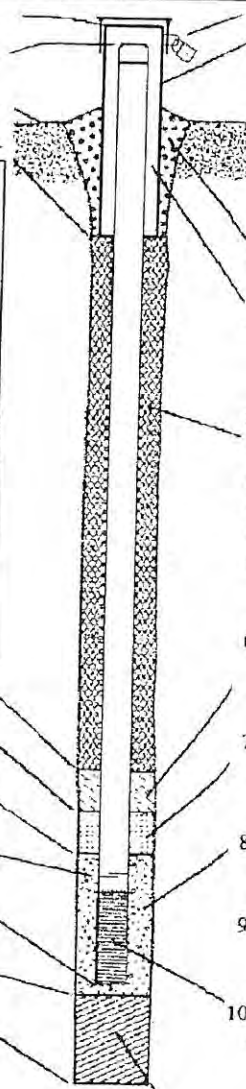
Name of Person or Firm Doing Filling & Sealing <u>Environmental TroubleShooters</u>	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) <u>07/28/2021</u>	DNR Use Only	
Street or Route <u>3825 Grand Avenue</u>	City <u>Duluth</u>	State <u>MN</u>	ZIP Code <u>55807</u>	Date Received
Telephone Number <u>(218) 348-7625</u>	Signature of Person Doing Work <u>[Signature]</u>	Date Signed <u>08/2/2021</u>	Comments	



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

Facility/Project Name <b>Fraser</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. ft. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name <b>PS-MW-1 VT 908</b>	
Facility License, Permit or Monitoring No.		Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Well Location <input type="checkbox"/>		Wis. Unique Well No. / DNR Well ID No.	
Facility ID		Lat. <b>46° 44' 09.30"</b> Long. <b>-92° 05' 22.86"</b> or		Date Well Installed <b>04/15/2016</b> m m d d y y y y	
Type of Well Well Code <b>/</b>		St. Plane _____ ft. N. _____ ft. E. S/C/N		Well Installed By: Name (first, last) and Firm <b>Joe Eye</b> <b>Environmental Troubleshooters</b>	
Distance from Waste/Source _____ ft.		Section Location of Waste/Source <b>SE 1/4 of SW 1/4 of Sec. 11, T. 49 N., R. 14 E</b>			
Enf. Stds. Apply <input type="checkbox"/>		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known		Gov. Lot Number	

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: <b>6</b> in.
C. Land surface elevation _____ ft. MSL	b. Length: <b>7</b> ft.
D. Surface seal, bottom <b>3</b> ft. MSL or _____ ft.	c. Material: Steel <input checked="" type="checkbox"/> 0.4 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <b>Wood Bumper Posts</b>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 3.0 Concrete <input checked="" type="checkbox"/> 0.1 Other <input type="checkbox"/>
14. Drilling method used: Rotary <input type="checkbox"/> 5.0 Hollow Stem Auger <input checked="" type="checkbox"/> 4.1 Other <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 3.0 Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 0.2 Air <input type="checkbox"/> 0.1 Drilling Mud <input type="checkbox"/> 0.3 None <input checked="" type="checkbox"/> 9.9	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 3.3 b. _____ Lbs/gal mud weight Bentonite-sand slurry <input type="checkbox"/> 3.5 c. _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 3.1 d. _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 5.0 e. <b>5</b> Ft <sup>3</sup> volume added for any of the above
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	f. How installed: Tremie <input type="checkbox"/> 0.1 Tremie pumped <input type="checkbox"/> 0.2 Gravity <input checked="" type="checkbox"/> 0.8
Describe: _____	6. Bentonite seal: a. Bentonite granules <input checked="" type="checkbox"/> 3.3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input type="checkbox"/> 3.2 c. _____ Other <input type="checkbox"/>
17. Source of water (attach analysis, if required): _____	7. Fine sand material: Manufacturer, product name & mesh size a. <b>Red Flint, Filter Sand, 0.010</b>
E. Bentonite seal, top <b>0.5</b> ft. MSL or _____ ft.	b. Volume added _____ ft <sup>3</sup>
F. Fine sand, top <b>1.5</b> ft. MSL or _____ ft.	8. Filter pack material: Manufacturer, product name & mesh size a. <b>Red Flint, Filter Sand, 0.050</b>
G. Filter pack, top <b>2.5</b> ft. MSL or _____ ft.	b. Volume added <b>10</b> ft <sup>3</sup>
H. Screen joint, top <b>5.5</b> ft. MSL or _____ ft.	9. Well casing: Flush threaded PVC schedule 40 <input type="checkbox"/> 2.3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2.4 Other <input type="checkbox"/>
I. Well bottom <b>13</b> ft. MSL or _____ ft.	10. Screen material: a. Screen type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/>
J. Filter pack, bottom <b>13.5</b> ft. MSL or _____ ft.	b. Manufacturer <b>Johnson</b>
K. Borehole, bottom <b>13.5</b> ft. MSL or _____ ft.	c. Slot size: <b>0.010</b> in.
L. Borehole, diameter <b>6 1/4</b> in.	d. Slotted length: <b>10</b> ft.
M. O.D. well casing <b>2</b> in.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1.4 Other <input type="checkbox"/>
N. I.D. well casing <b>1.98</b> in.	



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

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 <u>Fraser</u>	County Name <u>Douglas</u>	Well Name <u>PS-mw-1 VT908</u>	
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  41
  - surged with bailer and pumped  61
  - surged with block and bailed  42
  - surged with block and pumped  62
  - surged with block, bailed and pumped  70
  - compressed air  20
  - bailed only  10
  - pumped only  51
  - pumped slowly  50
  - Other \_\_\_\_\_  --
3. Time spent developing well 30 min.
4. Depth of well (from top of well casing) 15.6 ft.
5. Inside diameter of well 2.00 in.
6. Volume of water in filter pack and well casing 14 gal.
7. Volume of water removed from well 4.1 gal.
8. Volume of water added (if any) \_\_\_\_\_ gal.
9. Source of water added N/A
10. Analysis performed on water added?  Yes  No  
(If yes, attach results) \_\_\_\_\_

11. Depth to Water (from top of well casing)

	Before Development	After Development
a.	<u>10.47</u> ft.	<u>15.02</u> ft.

Date b. 04/27/2016 04/27/2016  
m m d d y y y y m m d d y y y y

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

12. Sediment in well bottom \_\_\_\_\_ inches \_\_\_\_\_ inches

13. Water clarity

Clear <input type="checkbox"/> 10	Clear <input checked="" type="checkbox"/> 20
Turbid <input checked="" type="checkbox"/> 15	Turbid <input type="checkbox"/> 25

(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: Brice Last Name: Wizner

Firm: Environmental Troubleshooters

17. Additional comments on development:  
\_\_\_\_\_

Name and Address of Facility Contact /Owner/Responsible Party

First Name: \_\_\_\_\_ Last 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: \_\_\_\_\_

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



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

**Verification Only of Fill and Seal**

**Route to DNR Bureau:**

Drinking Water       Watershed/Wastewater       Remediation/Redevelopment

Waste Management       Other: \_\_\_\_\_

1. Well Location Information				2. Facility / Owner Information			
County <b>Douglas</b>		WI Unique Well # of Removed Well <b>VT911</b>		Hicap #		Facility Name <b>Fraser Shipyard</b>	
Latitude / Longitude (see instructions) <b>46° 44' 09.38" N</b> <b>-92° 05' 19.98" W</b>		Format Code <input type="checkbox"/> DD <input checked="" type="checkbox"/> ODM		Method Code <input type="checkbox"/> GPS008 <input checked="" type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)	
1/4 / 1/4 <b>SE/SW</b> / 1/4 <b>SW</b> or Gov't Lot #		Section <b>11</b>		Township <b>49 N</b>		Range <input type="checkbox"/> E <input checked="" type="checkbox"/> W	
Well Street Address <b>1 Clough Ave</b>				Present Well Owner			
Well City, Village or Town <b>Superior</b>				Well ZIP Code <b>54880</b>			
Subdivision Name				Lot #		Mailing Address of Present Owner <b>1 Clough Ave</b>	
Reason for Removal from Service <b>Project Complete</b>				City of Present Owner <b>Superior</b>			
WI Unique Well # of Replacement Well				State <b>WI</b>		ZIP Code <b>54880</b>	

3. Filled & Sealed Well / Drillhole / Borehole Information		4. Pump, Liner, Screen, Casing & Sealing Material			
<input checked="" type="checkbox"/> Monitoring Well		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Water Well		Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Borehole / Drillhole		Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Original Construction Date (mm/dd/yyyy) <b>04/15/2016</b>		Screen removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
If a Well Construction Report is available, please attach.		Casing left in place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Total Well Depth From Ground Surface (ft.) <b>13.5'</b>		Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Casing Diameter (in.) <b>2"</b>		If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Lower Drillhole Diameter (in.)		If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Casing Depth (ft.)		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input checked="" type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____			
Was well annular space grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips			
If yes, to what depth (feet)? <b>13.5'</b>		For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input checked="" type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry			
Depth to Water (feet) <b>6.27'</b>					

5. Material Used to Fill Well / Drillhole			
<b>Bentonite liquid Grout</b>			
From (ft.) Surface	To (ft.) <b>13.5'</b>	No. Yards, Sacks Sealant or Volume (circle one) <b>1/2</b>	Mix Ratio or Mud Weight

**6. Comments**

7. Supervision of Work			DNR Use Only	
Name of Person or Firm Doing Filling & Sealing <b>Environmental Transles Contractors</b>	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) <b>07/28/2021</b>	Date Received	Noted By
Street or Route <b>3825 Grand Avenue</b>		Telephone Number <b>(218) 722-6013</b>	Comments	
City <b>Duluth</b>	State <b>MN</b>	ZIP Code <b>55807</b>	Signature of Person Doing Work 	Date Signed <b>08/2/2021</b>



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

Facility/Project Name <b>Fraser</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>PS-MW-2 VT911</b>
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. <b>46° 44' 09.38"</b> Long. <b>-92° 05' 19.98"</b> or	Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>
Facility ID	St. Plane _____ ft. N. _____ ft. E. S/C/N	Date Well Installed <b>04/15/2016</b> m m d d y y v v y
Type of Well Well Code _____ / _____	Section Location of Waste/Source <b>SE 1/4 of SW 1/4 of Sec. 11, T. 49 N, R. 14 E W</b>	Well Installed By: Name (first, last) and Firm <b>Joe Fye</b> <b>Environmental Troubleshooters</b>
Distance from Waste/Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/> Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Gov. Lot Number _____

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in.
C. Land surface elevation _____ ft. MSL	b. Length: _____ ft.
D. Surface seal, bottom <u>3</u> ft. MSL or _____ ft.	c. Material: _____ Steel <input type="checkbox"/> 04 Other <input checked="" type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>Wood Rumper Posts</u>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 3.0 Concrete <input checked="" type="checkbox"/> 0.1 Other <input type="checkbox"/>
14. Drilling method used: Rotary <input type="checkbox"/> 5.0 Hollow Stem Auger <input checked="" type="checkbox"/> 4.1 Other <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 3.0 Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 0.2 Air <input type="checkbox"/> 0.1 Drilling Mud <input type="checkbox"/> 0.3 None <input checked="" type="checkbox"/> 9.9	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 3.3 b. _____ Lbs/gal mud weight Bentonite-sand slurry <input type="checkbox"/> 3.5 c. _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 3.1 d. _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 5.0 e. <u>5</u> Ft <sup>3</sup> volume added for any of the above
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	f. How installed: Tremie <input type="checkbox"/> 0.1 Tremie pumped <input type="checkbox"/> 0.2 Gravity <input checked="" type="checkbox"/> 0.8
Describe _____	6. Bentonite seal: a. Bentonite granules <input checked="" type="checkbox"/> 3.3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input type="checkbox"/> 3.2 c. _____ Other <input type="checkbox"/>
17. Source of water (attach analysis, if required): _____	7. Fine sand material: Manufacturer, product name & mesh size a. <u>Red Flint, Filter Sand, 0.010</u>
E. Bentonite seal, top <u>0.5</u> ft. MSL or _____ ft.	b. Volume added _____ ft <sup>3</sup>
F. Fine sand, top <u>1.5</u> ft. MSL or _____ ft.	8. Filter pack material: Manufacturer, product name & mesh size a. <u>Red Flint, Filter Sand, 0.050</u>
G. Filter pack, top <u>2.5</u> ft. MSL or _____ ft.	b. Volume added <u>10</u> ft <sup>3</sup>
H. Screen joint, top <u>5.5</u> ft. MSL or _____ ft.	9. Well casing: Flush threaded PVC schedule 40 <input type="checkbox"/> 2.3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2.4 Other <input type="checkbox"/>
I. Well bottom <u>13</u> ft. MSL or _____ ft.	10. Screen material: a. Screen type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/>
J. Filter pack, bottom <u>13.5</u> ft. MSL or _____ ft.	b. Manufacturer <u>Johnson</u>
K. Borehole, bottom <u>13.5</u> ft. MSL or _____ ft.	c. Slot size: <u>0.010</u> in.
L. Borehole, diameter <u>6.4</u> in.	d. Slotted length: <u>10</u> ft.
M. O.D. well casing <u>2</u> in.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1.4 Other <input type="checkbox"/>
N. I.D. well casing <u>1.98</u> in.	

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

Signature \_\_\_\_\_

Firm \_\_\_\_\_

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

Facility/Project Name <i>Fraser</i>	County Name <i>Douglas</i>	Well Name <i>PS-mw-2 VT911</i>	
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  41
  - surged with bailer and pumped  61
  - surged with block and bailed  42
  - surged with block and pumped  62
  - surged with block, bailed and pumped  70
  - compressed air  20
  - bailed only  10
  - pumped only  51
  - pumped slowly  50
  - Other \_\_\_\_\_  --

3. Time spent developing well 55 min.

4. Depth of well (from top of well casing) 15.7 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 3.0 gal.

7. Volume of water removed from well 83 gal.

8. Volume of water added (if any) \_\_\_\_\_ gal.

9. Source of water added N/A

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
a. (from top of well casing)	<u>4.67</u> ft.	<u>14.60</u> ft.

Date

	Before Development	After Development
b.	<u>04/27/2016</u>	<u>04/27/2016</u>
	m m d d y y y y	m m d d y y y y

Time

	Before Development	After Development
c.	<u>2:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>3:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.

12. Sediment in well bottom \_\_\_\_\_ inches

13. Water clarity

	Before Development	After Development
Clear	<input type="checkbox"/> 10	Clear <input checked="" type="checkbox"/> 20
Turbid (Describe)	<input checked="" type="checkbox"/> 15	Turbid <input type="checkbox"/> 25

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

14. Total suspended solids \_\_\_\_\_ mg/l

15. COD \_\_\_\_\_ mg/l

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

First Name: Brice Last Name: Wizner

Firm: Environmental Troubleshooters

Name and Address of Facility Contact /Owner/Responsible Party

First Name: \_\_\_\_\_ Last 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: \_\_\_\_\_



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

**Verification Only of Fill and Seal**

**Route to DNR Bureau:**

Drinking Water       Watershed/Wastewater       Remediation/Redevelopment

Waste Management       Other: \_\_\_\_\_

**1. Well Location Information**      **2. Facility / Owner Information**

County <b>Douglas</b>		WI Unique Well # of Removed Well <b>ASMW3</b> <b>VJ912</b>		Hicap #		Facility Name <b>Fraser Shipyard</b>	
Latitude / Longitude (see instructions) <b>46° 44' 11.66</b> N <b>-92° 05' 22.39</b> W		Format Code <input type="checkbox"/> DD <input checked="" type="checkbox"/> DDM		Method Code <input type="checkbox"/> GPS008 <input checked="" type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)	
1/4 1/4 <b>SE/SW</b> 1/4 <b>SW</b>		Section <b>11</b>		Township <b>49 N</b>		Range <b>14</b> <input type="checkbox"/> E <input checked="" type="checkbox"/> W	
Well Street Address <b>1 Clough Ave</b>		Well City, Village or Town <b>Superior</b>		Well ZIP Code <b>54880</b>		Original Well Owner	
Subdivision Name		Lot #		Mailing Address of Present Owner <b>1 Clough Ave</b>		City of Present Owner <b>Superior</b> State <b>WI</b> ZIP Code <b>54880</b>	

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

Reason for Removal from Service <b>Project complete</b>		WI Unique Well # of Replacement Well		<input type="checkbox"/> Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> Screen removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Casing left in place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input type="checkbox"/> Borehole / Drillhole		Original Construction Date (mm/dd/yyyy) <b>04/15/2021</b>		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input checked="" type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____	
Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____		Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips	
Total Well Depth From Ground Surface (ft.) <b>13.5</b>		Casing Diameter (in.) <b>2"</b>		For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input checked="" type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry	
Lower Drillhole Diameter (in.)		Casing Depth (ft.)		No. Yards, Sacks Sealant or Volume (circle one) <b>1/8</b>	
Was well annular space grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		If yes, to what depth (feet)? <b>13.5'</b>		Depth to Water (feet) <b>5.74'</b>	

**5. Material Used to Fill Well / Drillhole**

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	<b>13.5'</b>	<b>1/8</b>	

**6. Comments**

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

Name of Person or Firm Doing Filling & Sealing <b>Environmental Troubleshooters</b>		License #		Date of Filling & Sealing or Verification (mm/dd/yyyy) <b>07/28/2021</b>		Date Received		Noted By			
Street or Route <b>3825 Grand Avenue</b>				Telephone Number <b>(218) 722-6013</b>				Comments			
City <b>Duluth</b>		State <b>MN</b>		ZIP Code <b>55807</b>		Signature of Person Doing Work		Date Signed <b>08/02/2021</b>			



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

Facility/Project Name <b>Fraser</b>	Local Grid Location of Well ft. <input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	Well Name <b>PS-MW-3 VT912</b>
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. <b>46° 44' 11.66"</b> Long. <b>-92° 05' 22.39"</b> or	Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>
Facility ID	St. Plane _____ ft. N. _____ ft. E. S/C/N	Date Well Installed <b>04/15/2016</b> m m d d y y v v y
Type of Well Well Code _____ / _____	Section Location of Waste/Source <b>SE 1/4 of SW 1/4 of Sec. 11, T. 49 N. R. 14 E W</b>	Well Installed By: Name (first, last) and Firm <b>Joe Fye</b> <b>Environmental Troubleshooters</b>
Distance from Waste/Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>	Gov. Lot Number _____
	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	

- A. Protective pipe, top elevation \_\_\_\_\_ ft. MSL  
B. Well casing, top elevation \_\_\_\_\_ ft. MSL  
C. Land surface elevation \_\_\_\_\_ ft. MSL  
D. Surface seal, bottom 3 ft. MSL or \_\_\_\_\_ ft.

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

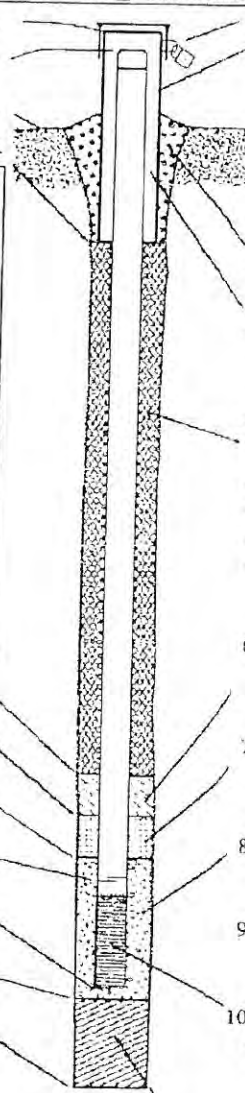
13. Sieve analysis performed?  Yes  No

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: 6 in.  
b. Length: 7 ft.  
c. Material: Steel  0.4  
Other  \_\_\_\_\_  
d. Additional protection?  Yes  No  
If yes, describe: Wood Bumper Posts
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. 5 Ft<sup>3</sup> volume added for any of the above  
f. How installed: Tremie  0.1  
Tremie pumped  0.2  
Gravity  0.8
6. Bentonite seal: a. Bentonite granules  3.3  
b.  1/4 in.  3/8 in.  1/2 in. Bentonite chips  3.2  
c. Other  \_\_\_\_\_
7. Fine sand material: Manufacturer, product name & mesh size  
a. Red Flint, Filter Sand, 0.010  
b. Volume added \_\_\_\_\_ ft<sup>3</sup>
8. Filter pack material: Manufacturer, product name & mesh size  
a. Red Flint, Filter Sand, 0.050  
b. Volume added 10 ft<sup>3</sup>
9. Well casing: Flush threaded PVC schedule 40  2.3  
Flush threaded PVC schedule 80  2.4  
Other  \_\_\_\_\_
10. Screen material:  
a. Screen type: Factory cut  1.1  
Continuous slot  0.1  
Other  \_\_\_\_\_  
b. Manufacturer Johnson  
c. Slot size: 0.010 in.  
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None  1.4  
Other  \_\_\_\_\_

- E. Bentonite seal, top 0.5 ft. MSL or \_\_\_\_\_ ft.  
F. Fine sand, top 1.5 ft. MSL or \_\_\_\_\_ ft.  
G. Filter pack, top 2.5 ft. MSL or \_\_\_\_\_ ft.  
H. Screen joint, top 5.5 ft. MSL or \_\_\_\_\_ ft.  
I. Well bottom 13 ft. MSL or \_\_\_\_\_ ft.  
J. Filter pack, bottom 13.5 ft. MSL or \_\_\_\_\_ ft.  
K. Borehole, bottom 13.5 ft. MSL or \_\_\_\_\_ ft.  
L. Borehole, diameter 6 1/4 in.  
M. O.D. well casing 2 in.  
N. I.D. well casing 1.98 in.

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

Signature \_\_\_\_\_

Firm \_\_\_\_\_

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

Facility/Project Name <u>Fraser</u>	County Name <u>Douglas</u>	Well Name <u>PS-mw-3 VT 912</u>
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  41
  - surged with bailer and pumped  61
  - surged with block and bailed  42
  - surged with block and pumped  62
  - surged with block, bailed and pumped  70
  - compressed air  20
  - bailed only  10
  - pumped only  51
  - pumped slowly  50
  - Other \_\_\_\_\_  --
3. Time spent developing well 60 min.
4. Depth of well (from top of well casing) 15.3 ft.
5. Inside diameter of well 2.00 in.
6. Volume of water in filter pack and well casing 2.9 gal.
7. Volume of water removed from well 31.7 gal.
8. Volume of water added (if any) \_\_\_\_\_ gal.
9. Source of water added N/A
10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. <u>4.57</u> ft.	<u>5.02</u> ft.
Date	b. <u>04/27/2016</u> m m d d y y y y	<u>04/27/2016</u> m m d d y y y y
Time	c. <u>12:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>2:00</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	_____ inches	_____ inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 25 (Describe) <u>Slight sediment.</u>
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: Brice Last Name: Wizner

Firm: Environmental Troubleshooters

17. Additional comments on development:

\_\_\_\_\_

Name and Address of Facility Contact/Owner/Responsible Party

First Name: \_\_\_\_\_ Last 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: \_\_\_\_\_



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

**Verification Only of Fill and Seal**

**Route to DNR Bureau:**

Drinking Water       Watershed/Wastewater       Remediation/Redevelopment

Waste Management       Other: \_\_\_\_\_

**1. Well Location Information**      **2. Facility / Owner Information**

County <b>Douglas</b>	WI Unique Well # of Removed Well <b>PSMW4</b>	Hicap # <b>UT910</b>	Facility Name <b>Fraser Shipyard</b>
Latitude/ Longitude (see instructions) <b>46° 44' 08.85</b> N <b>-92° 05' 23.77</b> W	Format Code <input type="checkbox"/> DD <input checked="" type="checkbox"/> PDM	Method Code <input type="checkbox"/> GPS008 <input checked="" type="checkbox"/> SCR002 <input type="checkbox"/> OTH001	Facility ID (FID or PWS)
1/4 1/4 <b>SE/SW</b> 1/4 <b>SW</b>	Section <b>11</b>	Township <b>49 N</b>	License/Permit/Monitoring #
or Gov't Lot #	Range <b>14</b>	<input type="checkbox"/> E <input checked="" type="checkbox"/> W	Original Well Owner
Well Street Address <b>1 Clough Ave</b>	Well ZIP Code <b>54880</b>	Present Well Owner	
Well City, Village or Town <b>Superior</b>	Subdivision Name	Lot #	Mailing Address of Present Owner <b>1 Clough Ave</b>
Reason for Removal from Service <b>project complete</b>	WI Unique Well # of Replacement Well	City of Present Owner <b>Superior</b>	State <b>WI</b>
<b>3. Filled &amp; Sealed Well / Drillhole / Borehole Information</b>		ZIP Code <b>54880</b>	

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

<input checked="" type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) <b>04/15/2016</b>	Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Water Well	If a Well Construction Report is available, please attach.	Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Borehole / Drillhole	Construction Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____	Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock	Formation Type: <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____	Screen removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Total Well Depth From Ground Surface (ft.) <b>13.5'</b>	Casing Diameter (in.) <b>2"</b>	Casing left in place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Lower Drillhole Diameter (in.)	Casing Depth (ft.)	Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Was well annular space grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Depth to Water (feet) <b>6.89'</b>	Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
If yes, to what depth (feet)? <b>13.5'</b>		Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
		If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
		If bentonite chips were used, were they hydrated with water from a known safe source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

**5. Material Used to Fill Well / Drillhole**

Required Method of Placing Sealing Material	Sealing Materials
<input type="checkbox"/> Conductor Pipe-Gravity <input checked="" type="checkbox"/> Conductor Pipe-Pumped	<input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete
<input type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____	<input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite Chips

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	<b>13.5'</b>	<b>28</b>	

**6. Comments**

**7. Supervision of Work**

Name of Person or Firm Doing Filling & Sealing <b>Environmental Troubleshooters</b>	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) <b>07/28/2021</b>	Date Received	Noted By
Street or Route <b>3825 Grand Avenue</b>	Telephone Number <b>(218) 722-6013</b>	Comments		

City <b>Duluth</b>	State <b>MN</b>	ZIP Code <b>55807</b>	Signature of Person Doing Work 	Date Signed <b>08/02/2021</b>
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Route to: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Fraser</b>		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.		Well Name <b>PS-MW-4 VT910</b>	
Facility License, Permit or Monitoring No.		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>		Wis. Unique Well No. DNR Well ID No.	
Facility ID		Lat. <b>46° 44' 08.85" Long. -92° 05' 23.77"</b> or		Date Well Installed <b>04/15/2016</b> m m d d y y y y	
Type of Well		St. Plane _____ ft. N. _____ ft. E. S/C/N		Well Installed By: Name (first, last) and Firm <b>Joe Eye Environmental Troubleshooters</b>	
Well Code _____		Section Location of Waste/Source <b>SE 1/4 of SW 1/4 of Sec. 11 T. 49 N. R. 14</b> <input type="checkbox"/> E <input checked="" type="checkbox"/> W			
Distance from Waste/Source _____ ft.		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known		Gov. Lot Number _____	
Enf. Stds. Apply <input type="checkbox"/>					

A. Protective pipe, top elevation _____ ft. MSL		1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation _____ ft. MSL		2. Protective cover pipe: a. Inside diameter: <u>6</u> in. b. Length: <u>7</u> ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation _____ ft. MSL		d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>wood bumper posts</u>
D. Surface seal, bottom <u>3</u> ft. MSL or _____ ft.		3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>		
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No		
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>		
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99		
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____		
17. Source of water (attach analysis, if required): _____		
E. Bentonite seal, top <u>0.5</u> ft. MSL or _____ ft.		4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
F. Fine sand, top <u>1.5</u> ft. MSL or _____ ft.		5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight ... Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite ... Bentonite-cement grout <input type="checkbox"/> 50 e. <u>5</u> Ft <sup>3</sup> volume added for any of the above
G. Filter pack, top <u>2.5</u> ft. MSL or _____ ft.		f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravily <input checked="" type="checkbox"/> 08
H. Screen joint, top <u>5.5</u> ft. MSL or _____ ft.		6. Bentonite seal: a. Bentonite granules <input checked="" type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
I. Well bottom <u>13</u> ft. MSL or _____ ft.		7. Fine sand material: Manufacturer, product name & mesh size a. <u>Red flint, filter sand, 0.010</u>
J. Filter pack, bottom <u>13.5</u> ft. MSL or _____ ft.		b. Volume added _____ ft <sup>3</sup>
K. Borehole, bottom <u>13.5</u> ft. MSL or _____ ft.		8. Filter pack material: Manufacturer, product name & mesh size a. <u>Red flint, filter sand, 0.050</u>
L. Borehole, diameter <u>6 1/4</u> in.		b. Volume added <u>10</u> ft <sup>3</sup>
M. O.D. well casing <u>2</u> in.		9. Well casing: Flush threaded PVC schedule 40 <input type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
N. I.D. well casing <u>1.98</u> in.		10. Screen material: a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
		b. Manufacturer <u>Johnson</u> c. Slot size: <u>0.010</u> in. d. Slotted length: <u>10</u> ft.
		11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 14 Other <input type="checkbox"/>

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

Signature \_\_\_\_\_

Firm \_\_\_\_\_



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

Facility/Project Name <i>Fraser</i>	County Name <i>Douglas</i>	Well Name <i>PS-MW-4 VT910</i>
Facility License, Permit or Monitoring Number	County Code	DNR Well ID Number

1. Can this well be purged dry?  Yes  No

2. Well development method
- surged with bailer and bailed  41
  - surged with bailer and pumped  61
  - surged with block and bailed  42
  - surged with block and pumped  62
  - surged with block, bailed and pumped  70
  - compressed air  20
  - bailed only  10
  - pumped only  51
  - pumped slowly  50
  - Other \_\_\_\_\_

3. Time spent developing well 90 min.

4. Depth of well (from top of well casing) 15.5 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 2.8 gal.

7. Volume of water removed from well 8.1 gal.

8. Volume of water added (if any) \_\_\_\_\_ gal.

9. Source of water added N/A

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

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. <u>5.15</u> ft.	<u>11.21</u> ft.
Date	b. <u>04/27/2016</u> m m d d y y y y	<u>04/27/2016</u> m m d d y y y y
Time	c. <u>10:45</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>12:30</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.

12. Sediment in well bottom \_\_\_\_\_ inches

13. Water clarity  
Clear  10 Turbid  15  
(Describe) \_\_\_\_\_ (Describe) Slight sediment

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: Brice Last Name: Wizner

Firm: Environmental Troubleshooters

Name and Address of Facility Contact/Owner/Responsible Party

First Name: \_\_\_\_\_ Last 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: \_\_\_\_\_