

DEPARTMENT OF THE AIR FORCE HEADQUARTERS 128TH AIR REFUELING WING (ANG)

19 December 2018

MEMORANDUM FOR WISCONSIN DEPARTMENT OF NATURAL RESOURCES ATTN: MR. RILEY NEUMANN

FROM: 128 CES/CEIE

128th Air Refueling Wing 1919 E Grange Ave Milwaukee WI 53207-6142

SUBJECT: Transfer monitoring wells

- 1. Monitoring wells MW-7P, MW-103P, MW-110P, MW-112P, and MW-115 are located on the 128th Air Refueling Wing, General Mitchell International Airport, Milwaukee, WI. The 128th Air Refueling Wing shall maintain ownership of property for which the monitoring wells are located. The DNR Form 4400-113 A & B for each well is attached.
- 2. The above monitoring wells were installed as part of the Legacy Jet Fuel Release at the Jet Fuel Offloading Facility (DNR BRRTS Activity #02-41-548175). These monitoring wells are no longer required as part of that investigation. The contractor responsible for the monitoring wells is HDR (POC Phil Warner) and funding for the investigation is provided by Defense Logistics Agency (DLA) (POC Stephen Deatherage).
- 3. The monitoring wells listed above shall be transferred for use in the 128th PFAS investigation (DNR BRRTS Activity #02-41-582725). Funding to maintain these monitoring wells shall be provided by the Air National Guard (POC Keith Freihofer). At the time of abandonment, the Air National Guard or their contractor shall perform required notification and filing of form 3300-005.
- 4. The point of contact for the installation regarding this matter is 2d Lt Brian Schrader, whom can be reached at 414-944-8414 or by email at brian.j.schrader4.mil@mail.mil

BRIAN J. SCHRADER, 2d Lt, WI ANG Environmental Scientist

5 Attachments:

- 1. MW-7P DNR Form 4400-113 A&B
- 2. MW-103P DNR Form 4400-113 A&B
- 3. MW-110P DNR Form 4400-113 A&B
- 4. MW-112P DNR Form 4400-113 A&B
- 5. MW-115 DNR Form 4400-113 A&B

1st Ind, DLA

MEMORANDUM FOR NGB A4

I concur MW-7P, MW-103P, MW-110P, MW-112P, and MW-115 are no longer needed and request they be transferred to NGB A4 for use in a separate investigation. Once transfer is completed DLA shall no longer provide funds for maintance or abandonment of the listed wells.

STEPHEN J. DEATHERAGE, Civ Defense Logistics Agency

2nd Ind, NGB A4

MEMORANDUM FOR 128 CES/CEIE

I concur MW-7P, MW-103P, MW-110P, MW-112P, and MW-115 shall be used in the perfluorinated compounds investigation. NGB A4 shall include the listed monitoring wells as part of the investigation well network and provide the required funding to maintain these wells. At the time of abandonment, the Air National Guard or their contractor shall perform required notification and filing of form 3300-005.

KEITH E. FREIHOFER, Civ Air National Guard Readiness Center

State of Wisconsin Department of Natural Resources	Route to:		d/wastewate tion/Redevelo				■ MONITORING WEŁL CONSTRUCTIC Form 4400-113A Rev. 7-98)N
Facility/Project Name	Local Grid	Location o	f Well				Well Name	_
Mitchell Field			ft. S.		ft. W.		MW07P Wis. Unique Well No. DNR Well ID No.	
Facility License, Permit or Monitoring No.	Local Grid	Origin	(estimated Long.	d: or \	Well Location		Date Well Installed	
Facility ID	1 —	349,332.4		2,534,0	24.54 ft. E.	-		
			/aste/Source			□ Ε.	10/27/2009	
Type of Well Well Code	NW Location o	NW FWall Bala	tive to Waste	, T.	N.R. Gov. Lot N		Well Installed By: (Name (first, last) and Firm	
Distance from Waste/ Enf. Stds.	u <u></u> Upgra	adient	s Sidegrad	dient	GOV. LOT IN	ullioei	Adam Sweet / Moraine Environmental	
Source ft. Apply	d Down	_	n Not Know	wn	<u> </u>			
A. Protective pipe, top elevation		ft. MSL		 1 ,	1.	Cap a	nd lock?	10
B. Well casing, top elevation		_ft. MSL] P			stive cover pipe:	_
C. Land surface elevation		ft. MSL.				Length		n. t.
		_		1		Materi	al: Steel 0	4
D. Surface Seal, bottom	ft. MSL or	2.0		\	d.	Additio	Other Yes N	10.
12. USCS classification of soil near screen			.	V		If ye	es, describe:	
GP☐ GM☐ GC☐ GW SM SC☐ ML☐ MH			- 6 600		\setminus 3.	Surfac	e seal: Bentonite 🔲 3	0
Bedrock		,_	´ 📓				Concrete 🔳 0	1
13. Sieve analysis attached?	Yes [□ No			4.	Materia	Other al between well casing and protective pipe:	_
				▓			Bentonite 🔲 3	0
14. Drilling method used: Hollow	Rotary Stem Auger		1 223				Annular space seal Sand Other	
	Other			 -			ar space seal: a. Granular Bentonite 3	
15. Drilling fluid used: Water	02 Air	. 🗆 0-			b. c.		Lbs/gal mud weightBentonite-sand slurry 3 Lbs/gal mud weightBentonite slurry 3	
Drilling Mud	03 None	≔	E 2007		d.		% BentoniteBentonite-cement grout 🔲 5	
16. Drilling additives used?	Yes I	No			e. f		Ft ³ volume added for any of the above stalled: Tremte 0	1
L. Drinning additives about	100	11.0				1101111	Tremie pumped 🔲 0	
Describe					6	Rentor	Gravity 0 nite seal: a. Bentonite granules 🔲 3	
17. Source of water (attach analysis, if re	quired):						in 3/8 in 1/2 in. Bentonite pellets 3:	
					/ c.		Bentonite Chips - 2 cu ft Other and material: Manufacturer, product name & mesh	h
			J		/ / a.		RW Sidley #4000	
E. Bentonite seal, topft. MS	L or	2.0 ft.			,		e added <u>0.25</u> ft³	
F. Fine sand, top ft. MS	Lor 2	.7.0 ft.			/ / a.	•	pack material: Manufacturer, product name & mes RW Sidley #1020 Silica	ш
					,		e added 2 ft ³	
G. Filter pack, top ft. MS					/ ^{9.}	Well ca	Flush threaded PVC schedule 80 🔲 2	
H. Screen joint, top ft. MS							Other PVC	<u> </u>
I. Well bottomft. MS					a.	Screer	Continuous slot 0	
J. Filter pack, bottomft. MS	L or3	5.0 ft.			b.	Manufa	OtherOther	<u></u>
K. Borehole, bottom ft. MS	Lor3	9.0 ft.			c.	Slot siz		
L. Borehole, diameter 8.25 in.			<u> </u>		_		Il material (below filter pack): None 10 Other	
M. O.D. well casing 2.25 in.						·		-
N. I.D. well casing 2.25 in.								
I hereby certify that the information on this Signature	torm is true	and correct	ot to the best	ot my kn	owlege.		·	-
Stain Wiskes			IMH Amer	icae In	^		LA LORENTONIZATZIMAN Construction Summar MOMOZE, must vis	

MWH Americas, Inc.

L::JOBS\100\7217\Weil Construction Summery\MW07P_mwc

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, 28, 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.

Facility/Firm:

City/State/Zip:

Street:

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Route to: We Remediation/Redevel		r □ Waste Management [Other □	<u> </u>		
Facility/Project Name Marchell Fre	County Name	Murilee	Well Name MW 7	9	
Facility License, Permit or Monitoring Number County Code		Wis. Unique Well Number			
1. Can this well be purged dry? 2. Well development method surged with bailer and bailed surged with block and pumped surged with block and pumped surged with block, bailed and pumped compressed air bailed only pumped only pumped slowly Other 3. Time spent developing well 4. Depth of well (from top of well casing) 5. Inside diameter of well 6. Volume of water in filter pack and well casing 7. Volume of water added (if any) 9. Source of water added	41 61 42 62 70 20 10 51 50	11. Depth to Water (from top of wen casing) Date: Time: 12. Sediment in well bottom: 13. Water Clarity: Color Odor Turbidity HNu Fill in if drilling fluids wer 14. Total suspended solids 15. COD 16. Well developed by: N First Name: There Firm: Manual Cub.	Last Name: 1050		
Name and Address of Facility Contact/Owner/Response		I hereby certify that the of my knowledge	above information is true and	correct to the best	

Print Name:

Firm:

State of Wisconsin Department of Natural Resources Route to: V	Vatershed/Wastewater	Waste Manag		MONITORING WELL CONSTRUCTION
	Remediation/Redevelopment	Other	Controller California	Form 4400-113A Rev. 7-98
Facility/Project Name	I coal Crid I castion of Wall			Well Name
WI ANG 128TO ARW] N. S	🖁 🖫.	MW-103P
Facility License, Permit or Monitoring No.	Local Grid Origin (estim	nated:) or V	Well Location	Wis. Unique Well No. DNR Well ID No.
	Lat ° , _ ` "	Long.	or	The state of the s
Facility ID	240C14 300	· Afternia A		Date Well Installed
	St. Plane 349524.78 ft. N		1 ft. E. S/C/N	07/10/20(3
Type of Well	Section Location of Waste/So	urce	Пъ	Well Installed By: Name (first, last) and Firm
Well Code 12 / BZ	1/4 of 1/4 of Sec,		N, R 🛮 🖫	
Distance from Waste/ Enf. Stds.	Location of Well Relative to V	Waste/Source	Gov. Lot Number	Adam Sweet
Classes A services		Sidegradient		Hocizon
Source 150 ft. Apply	d □ Downgradient n □	Not Known		
A. Protective pipe, top elevation _634	1:32 ft MSL		Cap and lock?	Yes No
P Well seeing to should	3. 67 ft. MSL	7 2	Protective cover p	•
			a. Inside diameter	: _
C. Land surface elevation	4.32 ft. MSL		b. Length:	_ L _ ft.
D. Surface seal, bottom 673.32 ft. MS	~ ~ ~ ~ ~	200000000	c. Material:	Steel 04
D. Surface seal, bottom _ L L ft. MS	Lor _ 1 II.		2	Other 🗆
12. USCS classification of soil near screen	n: (4554)	A Comment	d. Additional proj	lection?
	SW 🗆 SP 🗆 🗎	18/	If yes, describe	
	CL CH 🗆 🐪		•	Bentunite □ 30
Bedrock 🗆	188	3.	Surface scal:	Concrete 01
13. Sieve analysis performed?	Yes 🛮 No 🔛	**		Other 🗆
14. Drilling method used: Rot	tary □ 50	M 4	Material between	well casing and protective pipe:
Hollow Stem Au	1 1003	888	Maiora Delwedi	
	ther	888	Sand	
		XX		Other 🖬
15. Drilling fluid used: Water □ 0 2	Air 🗆 01	5.	Amular space sea	
	None 1 99	Ъ.		ud weight Bentonite-sand slurry □ 35
	TORE = 33	(∭ c.		ud weight Bentonite slurry 31
16. Drilling additives used?	Yes No	₩ d.	% Benton	te Bentonite-cement grout 🗆 50
Total Samuel Control		₩ e.	10.4 Ft	volume added for any of the above
Describe		f.	How installed:	Tremie 🔲 0 1
17. Source of water (attach analysis, if requ		33		Tremie pumped 🔲 02
17. Source of water (attach analysis, if requ	ired):	***		Gravity 🖬 08
8		б.:	Bentonite seal:	a. Bentonite granules 📋 33
/ 70.04		1	b. 🗆 1/4 in. 📭	3/8 in. □1/2 in. Bentonite chips ■ 32
E. Bentonite seal, top 673.32 ft. MS	Lorft. 💥		c	Other 🗆 🚃
(4.4 0.0	22 8			
F. Fine sand, top 647.32 ft MS	Lor_ ft. ft.\			l: Manufacturer, product name & mesh size
			a. RL) 5	dleg #4000
G. Filter pack, top 646.32 ft. MS	Lor_28ft.	23/	b. Volume added	
				al: Manufacturer, product name & mesh size
H. Screen joint, top 644.32 ft. MS	Lor 30 ft.		//	
	51.		b. Volume added	
I. Well bottom 634.32 ft. MS	Lor 40 ft.	200 A 200	Well casing:	
1. Well bottom	[編		wen casing.	
J. Filter pack, bottom 631.32 ft. MS	In 43 a			Flush threaded PVC schedule 80 24
J. Pinter pack, bottom it wis	E 01 11.			Other 🗆
K. Borehole, bottom 631.32 ft. MS	43 0		Screen material:	PVC
K. Borehole, bottom	L or II	₿ ₿	. Screen type:	Factory cut 📋 11
L. Borehole, diameter _ & _ in.				Continuous slot 🔲 01
L. Borehole, diameter _ L _ in.				Other 🗆 🏬
M. O.D. well casing 2.375 in.		\ b		Mono flex
M. O.D. well casing		/ 0		0. <u>© 10</u> in.
N. I.D. well casing 2.647 in.		\ d	. Slotted length:	· _ _ft.
N. I.D. well casing im.		11.1	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 knowl	edge.	
Signature /	Firm //a/	2		
Land E 18ch	14616	6 5		

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.

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater	Waste Management X
Remediation/Redevelopment []	Other
Facility/Project Name County Name	Well Name MW-)03P
Facility License, Permit or Monitoring Number County Code L L	Wis. Unique Well Number DNR Well ID Number
1. Can this well be purged dry? 2. Well development method surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block and pumped surged with block, bailed and pumped compressed air bailed only pumped only	11. Depth to Water (from top of well casing) Date b. 7 / 17 / 2013
pumped slowly	13. Water clarity Clear ☐ 1 0 Clear ☐ 2 0 Turbid ☐ 1 5 Turbid ☐ 2 5 (Describe) (Describe)
3. Time spent developing well 4. Depth of well (from top of well casisng) ———————————————————————————————————	(District) (District)
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.	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well gal. 8. Volume of water added (if any) gal.	14. Total suspended mg/l mg/l solids
9. Source of water added	15. COD mg/l mg/l
10. Analysis performed on water added?	16. Well developed by: Name (first, last) and Firm First Name: Ada Last Name: Sweet Firm: Hoszan Carbactan and Exploretm
17. Additional comments on development:	
Name and Address of Facility Contact/Owner/Responsible Party First Name: Last Name: Buckering e	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm: DI ANG 128th ARW	Signature: Simml-Satt
Street: 1919 E Grange Ave	Print Name: <u>Samuel P. Gillet</u>
City/State/Zip: Milbrukee /W/53207	Firm: MR

State of Wisconsia Department of Natural Resources Route to: Wa	ntershed/Wastewater		MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
Facility/Project Name WI ANG 128Th ARU	mediation/Redevelopment coal Grid Location of Well		Well Name MW-110P
Facility License, Permit or Monitoring No. L	ocal Grid Origin (cstimated	d:) or Well Location	Wis. Unique Well No. DNR Well ID No.
Facility ID	t. Plane 344562.42 ft. N. dection Location of Waste/Source	2565 616.64 ft. E. S/C/N	Date Well Installed 7/12/2013
Type of Well Code 12 P2 -	1/4 of 1/4 of Sec	,T N, R 🗎 W	Well Installed By: Name (first, last) and Firm
Distance from waste/ Ent. Stds.		te/Source lidegradient Not Known	Hocizon
A. Protective pipe, top elevation 673	. ⊈ ft. MSL	1. Cap and lock?	☐ Yes ☐ No
B. Well casing, top elevation 67.2.	36 ft. MSL	2. Protective cover p	- 2)
C. Land surface elevation 673.	64 ft. MSL	b. Length:	fi. _ L _ fi.
D. Surface seal, bottom 671.04 ft. MSL	or 2 ft.	c. Material:	Steel 🔼 04
12. USCS classification of soil near screen:		d. Additional prof	Other ☐ ∭ ection? ☐ Yes ☐ No
	/ 🖸 SP 💷 🔪	If yes, describe	
SM SC ML MH CL	. ■ СН 🗆	3. Surface scal:	Bentonite 30
140.00	s ■ No	V	Concrete 01
	y □ 50	4. Material between	well casing and protective pipe:
Hollow Stem Auge		SI .	Bentonite □ 30
Othe	er 🗆 🕌 📗	Sand	Other 🖪 🏬
15. Drilling fluid used: Water □ 0 2 A	.ir □ 01	5. Annular space sea	
	me 🖩 99		and weight Bentonite-sand slurry □ 35 and weight Bentonite slurry □ 31
16. Drilling additives used? ☐ Ye	s No	d % Bentoni	te Bentonite-cement grout 50
10. Diming Raditives assert	• • •		volume added for any of the above
Describe		f. How installed:	Tremie 01
17. Source of water (attach analysis, if require	ed):	*	Tremie pumped 0 2 Gravity - 0 8
% 		6. Bentonite seal:	a. Bentonite granules 33
E. Bentonite seal, top 671.04 ft. MSL	or _ <u>2</u> ft.	b. □1/4 in. ■3	3/8 in. 1/2 in. Bentonite chips 3 2 Other 1
F. Fine sand, top <u>646.04</u> ft. MSL	orft.	201	: Manufacturer, product name & mesh size
G. Filter pack, top 645.04 ft. MSL	or _2 8 ft.	a. ((L) > a. b. Volume added	<u>dleq #4000</u>
H. Screen joint, top 643.04 ft. MSL	or 30 n.	- RW side	
I. Well bottom 633.04 ft. MSL	or _ 40 ft.	b. Volume added 9. Well casing:	Flush threaded PVC schedule 40° a 2 3
J. Filter pack, bottom 630.04 ft. MSL	or _43_ ft.		Flush threaded PVC schedule 80 24 Other
K. Borehole, bottom 630.04 ft. MSL	or _ 42 ft.	10. Screen material: a. Screen type:	Factory cuit 11
L. Borehole, diameter6 in.		*\ . 	Continuous slot Other Other
M. O.D. well casing 2.375 in.		b. Manufacturer c. Slot size: d. Slotted length:	0.010 in.
N. I.D. well casing 2.047 in.		11. Backfill material (h
I hereby certify that the information on this fo	orm is true and correct to the best	of my knowledge.	Out I was
Signature /	Firm /LAD		:
- Sulfille	MUR		

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.

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Well Name Well Number DNR Well ID Number Before Development After Development of Mater of of ng) DNR Well ID Number Before Development After Development a
Well Number DNR Well ID Number Before Development After Development of Mater a. $\frac{4}{37}$ ft. $\frac{5}{6}$ $\frac{3}{3}$ ft. b. $\frac{07}{m}$ $\frac{17}{d}$ $\frac{2013}{d}$ $\frac{07}{y}$ $\frac{7}{y}$ $\frac{7}{y}$ $\frac{7}{y}$ $\frac{17}{y}$ $\frac{2013}{y}$ $\frac{17}{y}$ $\frac{7}{y}$ $\frac{17}{y}$ 1
Well Number DNR Well ID Number Before Development After Development of Mater of a. $\frac{4}{37}$ ft. $\frac{5}{63}$ ft. b. $\frac{07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{20}{y}$ ft. $\frac{3}{m}$ ft. $\frac{6}{d}$ ft. b. $\frac{07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{20}{y}$ ft. $\frac{3}{m}$ ft. $\frac{10}{m}$ m m d d d y y y y c. $\frac{1}{m}$ inches t in well $\frac{10}{m}$ inches Clear $\frac{10}{m}$ Clear $$
Before Development After Development of Water a
Before Development After Development of Water a
b. $\frac{0.07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{5.63}{d}$ ft. $\frac{0.07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{5.63}{d}$ ft. $\frac{0.07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{0.07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{0.07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{0.07}{m}$ ft. $\frac{17}{d}$ ft. $\frac{0.07}{m}$ f
t in well
(Describe) (Describe)
lling fluids were used and well is at solid waste facility: spended mg/l mg/l
mg/l mg/l
veloped by: Name (first, last) and Firm e: Ale Last Name: sweet Honzon Can Duckn: Alexander
•
1

Name and Address of Facility Contact/Owner/Responsible Party First Name: Last Name: Lecker Cd q e	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm: WI ANG 1287 ARW	Signature: Signature: De Carrel
Street: 1919 E Grange Ave.	Print Name: Samuel R. Gilled
City/State/Zip: Milvakee /WI/ 53207	Firm: HDR

	Watershed/Wastewater Remediation/Redevelopment	Waste Management	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
Facility/Project Name	Local Grid Location of Well		Well Name
WI ANG 128. THE]Sft. □ w	MW - (128
Facility License, Permit or Monitoring No.		ated: or Well Location Long. or or	Wis. Unique Well No. DNR Well ID No.
Facility ID	C. N. 340393 IC c. 21	Longor	Date Well Installed
	Section Location of Waste/Sou	1, <u>2565438.42</u> ft. E. S/C/N	m m d d y y y y
Type of Well	1/4 of1/4 of Sec.		Well Installed By: Name (first, last) and Firm
Well Code 12 / P2	Location of Well Relative to W		Adam sweet
Distance from Waste/ Enf. Stds. Source 260 ft Apply	u 🗆 Upgradient s 🔳	Sidegradient	Hocizon
	d Downgradient n D	Not Known	
		2. Protective cover	Yes No
	. 83 ft. MSL	a. Inside diamete	· ·
C. Land surface elevation 67:	3. 33 ft. MSL	b. Length:	_ <u>I</u> _ n.
D. Surface seal, bottom 672.33 ft. MS		c. Material:	Steel 🔊 04
12. USCS classification of soil near screen	1 K25030.401		Other 🗆 🧮
	SW □ SP Ē	d. Additional pro	
SM □ SC ■ ML□ MH□ C	CL CH CH C	M / /	Bentonite 30
Bedrock 🗆		3. Surface scal:	Concrete 01
	Yes 📕 No		Other 🗆 🧱
	tary 🗆 50	4. Material between	well casing and protective pipe:
Hollow Stem Au	uger ■ 41	Sand	Bentonite 🗆 30
	uner 🗆 💥	833	Other 🗆
15. Drilling fluid used: Water □ 0 2	Air □ 01	5. Annular space se	al: a. Granular/Chipped Bentonite 3 3 nud weight Bentonite-sand slurry 3 5
Drilling Mud □ 03	None 29 8		nud weight Bentonite-sand sturry 3
16 Delling addition would 3	7 PR NY.		ite Bentonite-cement grout \Box 50
16. Drilling additives used?	Yes No		volume added for any of the above
Describe		f. How installed	
17. Source of water (attach analysis, if requ	uired):		Tremie pumped 🔲 02
		6. Bentonite seal:	Gravity □ 08 a. Bentomite granules □ 33
		KXXX	a. Bentomite granules ☐ 33 3/8 in. ☐ 1/2 in. Bentonite chips ■ 32
E. Bentonite seal, top 672.33 ft. MS	Lorft	/ 0	Other 🗆 🎆
F. Fine sand, top 652.33 ft. MS	L or _ 21ft.		al: Manufacturer, product name & mesh size
G. Filter pack, top 651.33 ft. MS	L or _22 ft.	b. Volume added	1667,564
H. Screen joint, top 650.33 ft. MS	L or _23_ ft.	8. Filter pack mater	ial: Manufacturer, product name & mesh size
,	L or 33 ft.	b. Volume added	1_4.4 ft3
I. Well bottom	Lu	9. Well casing:	Flush threaded PVC schedule 40 23 Flush threaded PVC schedule 80 24
J. Filter pack, bottom 640.33 ft. MS	L or _33ft.		Flush threaded PVC schedule 80 24 Other D
K. Borchole, bottom 640.33 ft. MS	Lor 33 ft.	10. Screen material:	
, , , , , , , , , , , , , , , , , , ,		a. Screen type:	Factory cut 11 Continuous slot 01
L. Borehole, diameter in,			Continuous slot 01
7 116		b. Manufacturer	
M. O.D. well casing 2.275 in.		c. Slot size: d. Slotted length	0. <u>010</u> in:
N. I.D. well casing 2.047 in.		11. Backfill material	
I hereby certify that the information on this	form is true and correct to the b	oest of my knowledge.	
Signature	Firm HOR		,

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, 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

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater Waste Management Remediation/Redevelopment Other ______ County Name Well Name Facility/Project Name MW-112P ARW Facility License, Permit or Monitoring Number Milwaukee DNR Well ID Number County Code Wis. Unique Well Number 41 Yes Yes □ No Before Development After Development 1. Can this well be purged dry? 11. Depth to Water .20_ft. (from top of 2. Well development method well casing) surged with bailer and bailed 41 surged with bailer and pumped 61 Date surged with block and bailed 42 surged with block and pumped 62 surged with block, bailed and pumped 70 Time compressed air 20 bailed only 10 $O \cdot O_{inches}$ 12. Sediment in well pumped only 51 bottom pumped slowly 50 Clear 🔀 20 13. Water clarity Clear 🔲 10 Other Turbid □ 25 Turbid 👺 15 (Describe) (Describe) 3. Time spent developing well 4. Depth of well (from top of well casisng) 5. Inside diameter of well 6. Volume of water in filter pack and well casing Fill in if drilling fluids were used and well is at solid waste facility: 7. Volume of water removed from well mg/l 14. Total suspended 8. Volume of water added (if any) solids 15. COD mg/l 9. Source of water added 16. Well developed by: Name (first, last) and Firm ☐ Yes ☐ No First Name: 10. Analysis performed on water added? (If yes, attach results) 17. Additional comments on development: Name and Address of Facility Contact/Owner/Responsible Party I hereby certify that the above information is true and correct to the best Last First of my knowledge. Name: Signature:

Print Name:

Firm:

State of Wisconsin Department of Natural Resources Route to: Watershed/W		MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
Facility/Project Name Local Grid	Redevelopment Other Location of Well N	
WI ANG 128Th ARW	Location of wen P.	_ft. B. Well Name MW - 115
Facility License, Permit or Monitoring No. Local Grid	Pricin	I Location Wis. Unique Well No. DNR Well ID No.
· · · · · · · · · · · · · · · · · · ·	Long.	11
Facility ID		or
oi. Plane o	49360.02 ft. N, 2565157.98	ft. E. S/C/N Date Well Installed 1 / 0 2 / 2 0 1 3
Type of Well Section Loc	ation of Waste/Source	
11 44 1 1/4 6	1/4 of Sec, T N, 1	R. Well Installed By: Name (first, last) and Firm
Well Code 17 / 11 Location of	Well Relative to Waste/Source Gov	Lot Number Adam Sweet
Distance from Waste/ Enf. Stds. U Upg		Hacian
	ngradient n 🗆 Not Known 📗	Holizon
A. Protective pipe, top elevation 630 55 ft. M		p and lock? ■ Yes □ No
B. Well casing, top elevation 670.14 ft. N	isi. ———————————————————————————————————	otective cover pipe:
8. 1	N.	Inside diameter:
C. Land surface elevation 670.55 ft. M	ISL b.	Length: _ L _ ft.
D. Surface seal, bottom 46.55 ft. MSL or _ 1.	C. Service C.	Material: Steel 🖼 04
		Other 🗆
12. USCS classification of soil near screen:	Transfer or	Additional protection? ☐ Yes ☐ No
GP GM GC GW SW SP		If yes, describe:
SM SC ML MH CL CH		Bentonite 30
Bedrock 🗆	3. Su	rface seal: Concrete 0 1
13. Sieve analysis performed? Yes M No		Other 🗆
14. Drilling method used: Rotary ☐ 50	4. Ma	sterial between well casing and protective pipe:
Hollow Stem Auger 4 1	I 🐼 🔯	Bentonite □ 30
Other 🗆		Sand Other
	5 An	nular space seal: a. Granular/Chipped Bentonite 3 3 3
15. Drilling fluid used: Water □ 0 2 Air □ 0 1	1600 DXX	
Drilling Mud 103 None 299	b	
16. Drilling additives used? ☐ Yes ■ No		5.8 Ft 3 volume added for any of the above
	I I'C/A KXXI	·
Describe	I 🔛 🔛 II.	77
17. Source of water (attach analysis, if required):		
		ontonite seal: a. Bentonite granules 33
	— │	man man
E. Bentonite seal, top 669.55 ft. MSL or	ft. 🔛 Di	
•		Other 🗆 🏬
F. Fine sand, top 667.55 ft. MSL or 3	6 7. Fin	e sand material: Manufacturer, product name & mesh size
, ··· :		RU 5: dela # 4000
G. Filter pack, top 666.55 ft. MSL or 4		Volume added O.4 ft ³
	, Tan	
H. Screen joint, top 665.55 ft. MSL or5		er pack material: Manufacturer, product name & mesh size
11. 0010011 John 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
I. Well bottom 650.55 ft. MSL or 20	f b.	
		-
J. Filter pack, bottom 650.55 ft. MSL or 20		
1. The pack, totton 3		Other 🗆 💮
K. Borehole, bottom 650.55 ft. MSL or 20	Δ 6////	reen material: PVC
K. Dolehole, Collon La Mob of	a.	Screen type: Factory cut 11
L. Borehole, diameterin,		Continuous slot 01
L. Borenore, diameter U m.	\	Other 🗆
M. O.D. well casing 2.375 in.		Manufacturer Monoflex
Mr. O.D. Well casing will a m.	`	Slot size: 0.00 in. Slotted length: 1.5 ft.
N. I.D. well casing 2.047 in.	•	
N. I.D. well casing 2.04 in.	11. Bac	ckfill material (below filter pack): None 1 4
I hereby certify that the information on this fame.	and correct to the heart of	Other 🗆 🧱
I hereby certify that the information on this form is true		રુદ.
Signature A bilet	Firm Un O	
Jany /4/1/7	HDR	

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.

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater	Waste Management X
Remediation/Redevelopment	Other
Facility/Project Name County Name	Well Name
WI ANG 12874 ARW Mil	werker MW-115
Facility License, Permit or Monitoring Number County Code	
1. Can this well be purged dry?	Before Development After Development 11. Depth to Water
2. Well development method surged with bailer and bailed	(from top of well casing) Date b 2 0 3 2 0 3 1 2 0 3 2 0 1 3 m m d d y y y y y m m d d y y y y y Time c. 1:45 p.m. 1:15 p.m. 12. Sediment in well bottom 13. Water clarity Clear 1 0 Clear 2 2 0
3. Time spent developing well	Turbid □ 15 Turbid □ 25 (Describe)
4. Depth of well (from top of well casisng) _20.5 ft.	
5. Inside diameter of well _2.00 in.	
6. Volume of water in filter pack and well casing gal.	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well	14. Total suspendedmg/l
8. Volume of water added (if any) gal.	solids
9. Source of water added	15. COD mg/l mg/l
2 32 37 32 9 9 9 9 9	16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added?	First Name: Adam Last Name: Sweet Firm: Horizon Construction and Exploration
17. Additional comments on development:	
Name and Address of Facility Contact/Owner/Responsible Party First Last	I hereby certify that the above information is true and correct to the best
Facility/Firm: WI ANG 12874 ARU	of my knowledge. Signature:
Street: 1919 E Grange Ave.	Print Name: Alam Sweet
City/State/Zip: Milweukee/WI/53207	Firm: Horizon Construction and Exploration