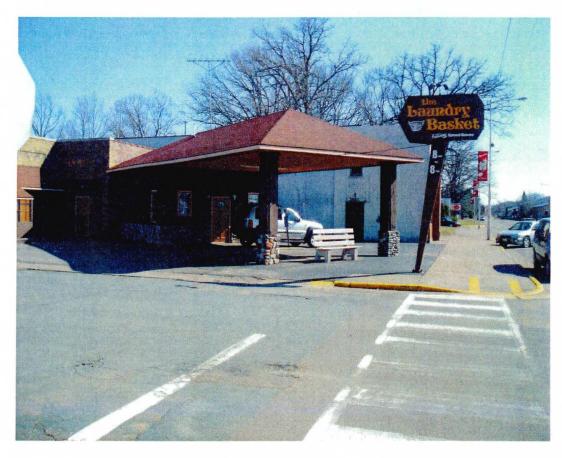
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Construction Documentation Report

The Laundry Basket 300 South Main Street Luck, Wisconsin

Project No. 06080801 WDNR BRRTS # 02-49-544893

October 2011

Construction Documentation Report

The Laundry Basket 300 South Main Street Luck, Wisconsin

Project No. 06080801 WDNR BRRTS # 02-49-544893



Prepared by:

MSA Professional Services, Inc. 1230 South Boulevard Baraboo, Wisconsin 53913 Phone: (800) 362-4505

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I. SUBMITTAL CERTIFICATION

The following submittal certifications are provided in accordance with ss. NR 712.07 and NR 712.09, Wis. Adm. Code, and are applicable only to the The Laundry Basket project in the Village of Luck, Wisconsin.

"I, Jayne A. Englebert, hereby certify that I am a Hydrogeologist as that term is defined in s. NR 712.03(1), Wisconsin Administrative Code, and that to the best of my knowledge, all of the information contained in this document is correct, and the document was prepared in compliance with all applicable requirements in Chapters NR 700 to 726, Wisconsin Administrative Code."

Report Prepared By:

Jayne A. Englebert

Jayne A. Englebert, Hydrogeologist

10 -27-2011 Date

"I, Kristi L. DuBois, hereby certify that I am an engineer as that term is defined in s. NR 712.03(2), Wisconsin Administrative Code, and that to the best of my knowledge, all of the information contained in this document is correct, and the document was prepared in compliance with all applicable requirements in Chapters NR 700 to 726, Wisconsin Administrative Code.

Report Prepared By:

Kristi L. Du Bois, Project Engineer, No. 31561

10-21-11 Date

II. EXECUTIVE SUMMARY

This Construction Documentation Report has been prepared for The Laundry Basket in the Village of Luck to document installation of injection wells, a sub-slab depressurization system and the October 12, 2011 whey injection event.

The Remedial Action Options Report (MSA, January 2011) discussed alternatives for technologies to address groundwater contamination and vapor intrusion at the site in accordance with WAC NR 722. The technology approved for the site was enhanced insitu bioremediation with whey injection and the installation of vapor mitigation systems. The Design Report (MSA, August 2011) discussed the nature of contamination and the remedial action design in accordance with WAC NR 724.

Eight permanent injection wells were installed on September 7, 2011. The injection wells are 2-inch diameter Schedule 40 PVC with 0.030 slot screens with the screened portion of the well was installed two feet below the water table elevation, from approximately ten to twenty feet below ground surface.

Whey was delivered to the site by the Burnett Dairy Cooperative for the enhancement of insitu anaerobic bioremediation to address groundwater contaminated by chlorinated volatile organic compounds (CVOCs). Whey was injected under a temporary exemption to ch. NR 140 (WDNR, 9/8/11) and under WPDES permit WI-0046566-5 dated September 27, 2011.

Design of the sub-slab depressurization (SSD) system was based on sub-slab communication tests performed by the installation contractor, Croix Valley Radon Mitigation, with the system installation on September 9, 2011. The SSD consists of three points installed near the former dry cleaning machine, through the main floor slab, and one installed in the basement of the building. One Radonaway fan is connected to the two points on the main floor and a second fan is connected to the point in the basement.

III. GENERAL INFORMATION

The following general information is provided as required by s. NR 724.05(2)(e)2, Wis. Adm. Code.

Project Title:

The Laundry Basket

Purpose:

The Construction Documentation Report documents the injection of whey substrate for enhanced anaerobic bioremediation of groundwater at the site. Also included is the vapor mitigation system installation

documentation.

BRRTs Number:

WDNR File No. 02-49-544893

Responsible Party

Lois Baldwin 517 4th Street Luck, WI 54421

WDNR Contact:

Phil Richard

Wisconsin Department of Natural Resources

875 South 4th Avenue Park Falls, WI 54452-1130

Consultant:

Brian Hegge, Project Manager MSA Professional Services, Inc.

1835 N Stevens Street

Rhinelander, Wisconsin 54501-2163

(715) 362-3244

Site Name, Address, and Location:

300 S. Main Street

Village of Luck, Wisconsin, 54853

Polk County

SW 1/4, SW 1/4, Section 28, T36N, R17W

Location and Layout Map: Injection Well Information:

Refer to Figures 1 and 2 Refer to Appendix A

IV. SITE USE AND BACKGROUND INFORMATION

This section provides a brief description of remedial actions at the site. This section meets the requirements of s. NR 724.15, Wis. Adm. Code.

A. Site Use

The building is an active laundromat and ice cream parlor.

B. Background Information

Prior use of the site included a gas station and dry cleaning facility. The investigation of a petroleum release found chlorinated solvents commingled with petroleum compounds. The extent of soil contamination from the petroleum release was limited to the former pump island and the petroleum contaminated groundwater plume concentrations were found to be stable or decreasing. The petroleum release portion of the site was closed by the WDNR in January 2010.

Dry cleaning equipment was dismantled and removed from the property in 2009.

V. REMEDIAL ACTION

This section documents the completed remedial action for the site – injection of whey substrate to enhance anaerobic reductive dechlorination of chlorinated ethenes and installation of a sub-slab depressurization system to mitigate vapor intrusion into the former dry cleaning facility, including the ice cream shop. This section meets the requirements of WAC NR 724.15.

A. Sub-Slab Depressurization System Installation

Design of the sub-slab depressurization (SSD) system was based on sub-slab communication tests performed by the installation contractor, Croix Valley Radon Mitigation, Luck, WI. The system was installed on September 9, 2011.

Three suction points were installed; one suction point was installed near the former dry cleaning machine, one was installed near the water heater in the southeast corner of the Laundry Basket building and one was installed in the basement of the building. Two Radonaway GP501 fans were installed, one for the two points in the laundry area, and one for the point in the basement of the building.

MSA used a hand auger to install a 6 feet deep boring into the source area by the former dry cleaning machine. A 0.03 slot screen was installed inside the 4 inch

vent pipe in an effort to improve air flow to contaminated soil in that area. The concrete floor near the former dry cleaning machine was sealed with clear coat sealer.

Basement cracks, drains, and other openings were sealed to maintain negative pressure under the basement slab.

See Appendix B for system installation information and Figure 2 for depressurization point locations.

B. Injection Well Installation

Eight permanent injection wells were installed on September 7, 2011. Wells IW-1 through IW-8 are 2-inch diameter Schedule 40 PVC with 0.030 slot screens. The screened portion of the well was installed two feet below the water table elevation, from approximately ten to twenty feet below ground surface. See **Appendix A** for injection well boring logs and **Figure 3** for well locations.

C. Whey Substrate Injection – Substrate Loading Rates and Delivery

The injection of whey took place on October 12, 2011. The whey was delivered in a tanker truck from the Burnett Dairy Cooperative in Grantsburg. The lactose concentration was 9% as stated in the Design Report (MSA, 2011).

Whey was delivered in a tank truck, and the truck was left on site during the injection process. Whey was transferred to a 1,000-gallon poly tank and transferred via pump to the manifold system. Injection rates were steady at 3 to 4 gallons per minute per injection well. See Table 1 for groundwater elevations in nearby monitoring wells during the injection event. See Table 2 for a log of injection flow rates, start and end times, pressures, groundwater elevations and gallons injected.

Calculations of lactose content per truckload are as follows:

- 1. 49,280 # whey delivered x 8.6 #/gal whey = 5,730 gallons of whey (some whey left in poly tank, assume 5,600 gallons of whey injected)
- 2. $48,160 \text{ lb } \times 0.09 = 4,334 \text{ lb lactose}$
- 3. Each pound of lactose produces 0.047# hydrogen through fermentation. Each truckload:

$$4,334 \ lb \ lactose \times \frac{0.047 \ lb \ Hydrogen}{\# \ lactose} = 204 \ lb \ Hydrogen$$

The Substrate Design Tool calculated a life cycle hydrogen requirement of 22.7 pounds and using a design factor of 7, the total life cycle hydrogen

requirement is 158 pounds. Approximately 204 pounds of hydrogen was delivered via injection.

D. Vapor Readings

During injection OVM readings were obtained within the Laundry Basket building to assure whey injection was not forcing vapors into the building. Four readings were obtained throughout the day, and no vapors were detected.

VI. PERMITS AND APPROVALS

A. Wisconsin Department of Natural Resources

Whey was injected under WPDES permit WI-0046566-5 and under temporary exemption to ch. NR 140.

VII. APPLICABLE ENVIRONMENTAL LAWS AND STANDARDS

This section discusses the public health and environmental laws and standards applicable to the contamination and the remedial action being implemented, as well as the physical location where the environmental standards will be complied with for each medium of concern. This section was prepared in accordance with s. NR 724.09(7), Wis. Adm. Code.

A. Soil Laws and Standards

The environmental laws relative to soil contamination that are applicable to the site are the NR 720 RCLs, as required by s. NR 722.09(2)(a), Wis. Adm. Code. Contaminated soil located adjacent to the building will not be addressed with the injection of whey substrate; however, the sub-slab depressurization system addresses the public health concern with vapor intrusion from contaminated soil in the Laundry Basket building. If the building is to be removed in the future and natural biodegradation processes have not sufficiently reduced concentrations of contaminated soil under the building and adjacent to the building, the contaminated soil may need to be addressed at that time.

B. Air Laws and Standards

The environmental laws pertaining to air that are applicable to the site are the air emission limits set forth in WAC NR 419 and WAC NR 445.

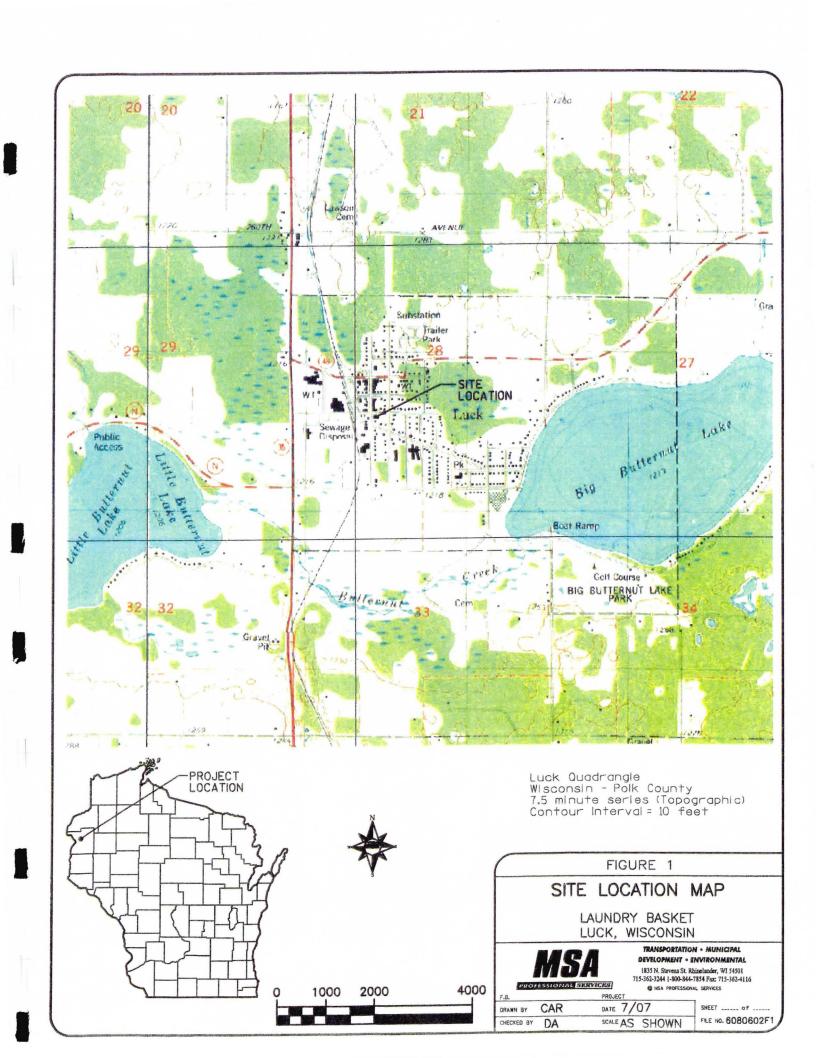
C. Groundwater Laws and Standards

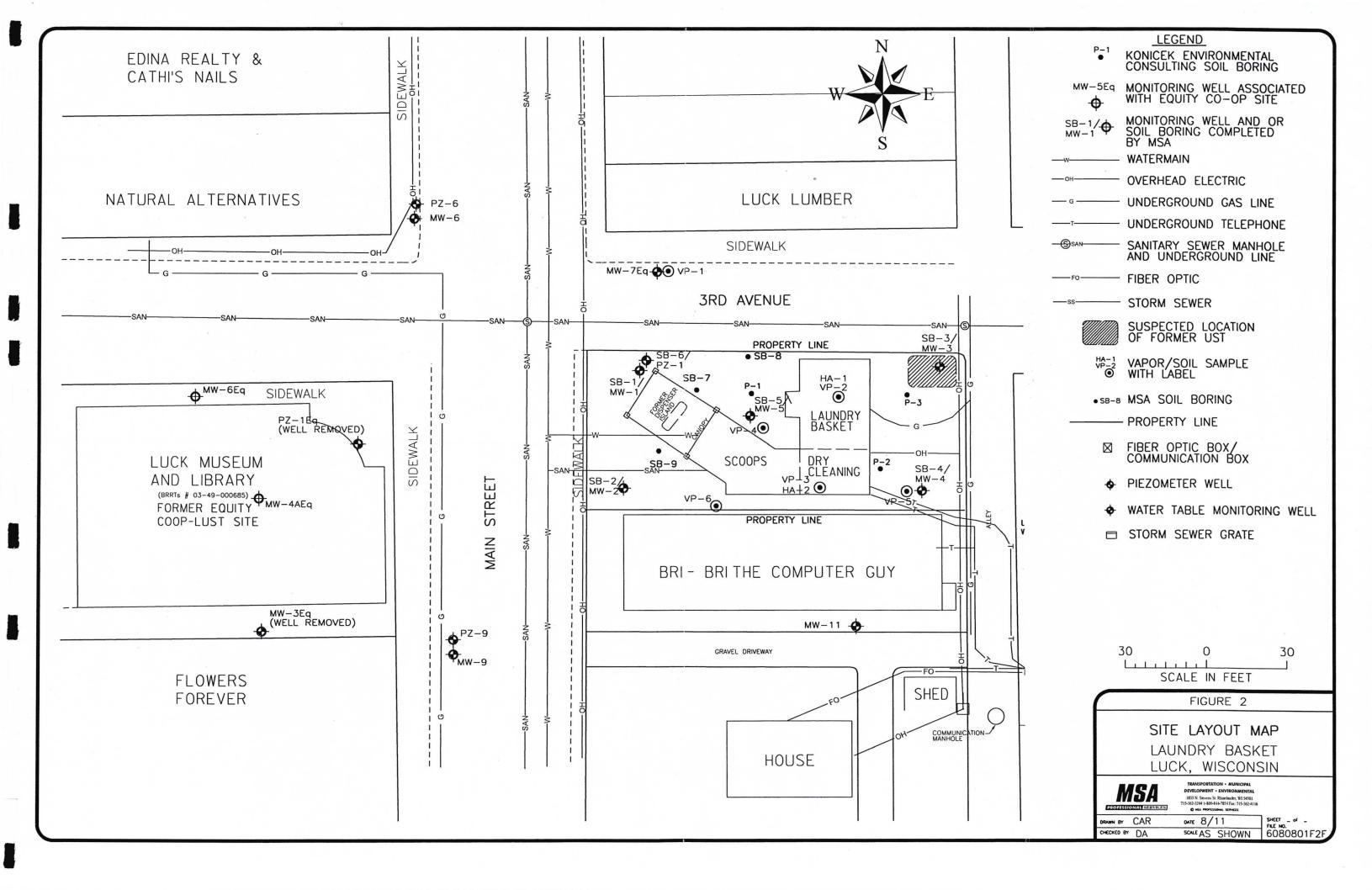
The groundwater remedial action objectives for the site are WAC NR 140 PALs, as required by s. NR 722.09(2)(b), Wis. Adm. Code. However, it is possible that groundwater concentrations will reach a steady-state level above cleanup requirements, which do not appreciably decline with extended remedial action effort(s). If this occurs, alternative groundwater remedial action objectives may be proposed to the WDNR.

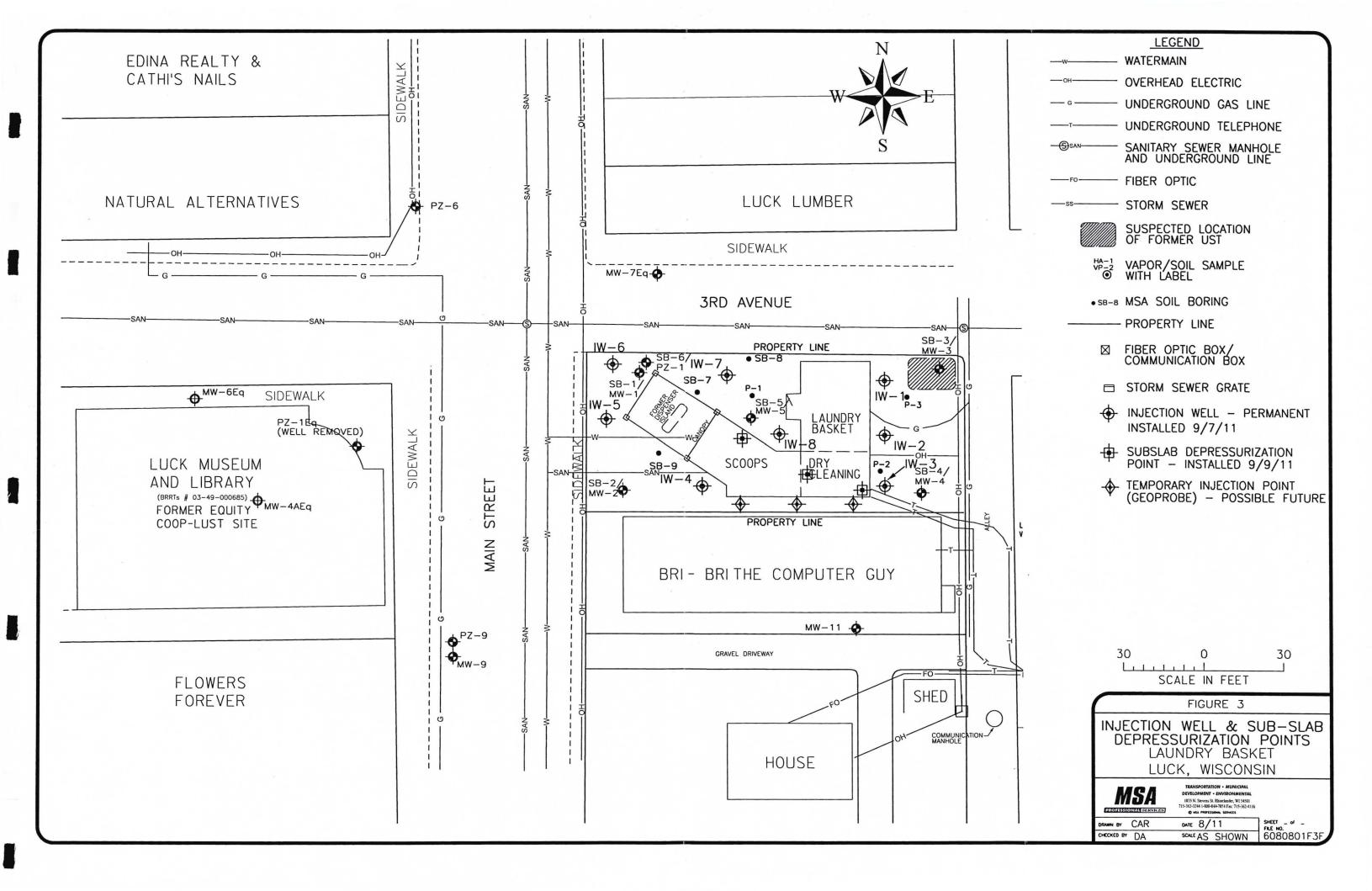
VIII. PRELIMINARY MONITORING PROGRAM

The monitoring program remains as described in the Design Report (MSA, 2011). Quarterly sampling will occur in November 2011.

FIGURES







TABLES

Table 1 **Groundwater Elevations - Whey Injection Event** The Laundry Basket, Luck Project #6080801 12-Oct-11 **GW** Elevation Well ID Time (ft bgs) MW-1 7.71 Prior to Injection 10:47 a.m. 7.29 12:10 p.m. 7.31 2:45 p.m. 7.48 7.43 3:43 p.m. After Injection 7.21 MW-2 Prior to Injection 7.72 10:45 a.m. 7.51 7.51 12:12 p.m. 2:47 p.m. 7.52 3:40 p.m. 7.50 7.66 After Injection MW-3 7.62 Prior to Injection 10:55 a.m. 7.5412:15 p.m. 7.51 2:40 p.m. 6.93 3:46 p.m. 6.87 6.68 After Injection MW-4 Prior to Injection 11.15 11:02 a.m. 11.07 11:14 p.m. 11.06 2:42 p.m. 10.81 3:47 p.m. 10.68 After Injection 10.40 MW-5 Prior to Injection 8.22 10:50 a.m. 7.76 12:20 p.m. 7.82 2:50 p.m. 7.60

Note: OVM readings from within the Laundry Basket building were obtained at 10:30 a.m., 1:05, 2:55 and 4:05 p.m. and readings were zero.

3:44 p.m.

After Injection

7.39

7.20

Table 2 Injection Log The Laundry Basket, Luck Project #6080801

12-Oct-11

	Vell ID Elev Prior	Start Time	End Time	Estimated Flow Rate	Pressure (psig)	Gallons Injected	GW Elevation After Injection (ft bgs)
IW 1	7.59	2:25 p.m.	4:50 p.m.	@ 4:00 p.m. 4 gpm	2	775	7.66
IW 2	7.69	2:25 p.m.	4:50 p.m.	@ 4:00 p.m. 4 gpm	2	775	7.23
IW 3	8.2	2:25 p.m.	4:50 p.m.	4 gpm	2	775	7.71
IW 4	7.84	9:50 a.m.	1:45 p.m.	3-4 gpm	4 2 @ 11:20 a.m.	625	7.71
IW 5	7.62	9:50 a.m.	1:45 p.m.	3-4 gpm	4 2 @ 11:20 a.m.	625	7.57
IW 6	7.51	9:50 a.m.	1:45 p.m.	3-4 gpm 4 gpm @ 1:30	4 2 @ 1:30 p.m.	625	7.00
IW 7	7.65	9:50 a.m.	1:45 p.m.	3-4 gpm 4 gpm @ 1:30	2	625	7.22
IW 8	8.09	2:25 p.m.	4:50 p.m.	4	2	775	

Notes:

Total Injection Volume 5,600 gallons Blank - Data not obtained

APPENDIX A

Injection Well Boring Logs

	Watershed/Wastewater Remediation/Redevelopment	Waste Management ☐ Other ☑ DERP	Form 4400-113A	L CONSTRUCTIO Rev. 7-98
Facility/Project Name LAVNORY BASKET	Local Grid Location of Well	JN BE	Well Name TW-	1
Facility License, Permit or Monitoring No	Local Grid Origin 🔲 (estim	ated:) or Well Location Long.	Wis, Unique Well No.	DNR Well ID No.
Facility ID	St. Planeft. N	fl. E. S/C		10212011
Type of Well Well Code 6 1	Section Location of Waste/Sot SW1/4 of SW 1/4 of Sec. Location of Well Relative to V	28.T. 36 N.R. 17	(46/22 00/(4	me (first, last) and Fire
Distance from Waste/ Enf. Stds. Source	u [] Upgradient s Z d [] Downgradient n []	Sidegradient	Landon M	·12ahn
A. Protective pipe, top elevation	ft_MSL	1. Cap and lock? 2. Protective cov	· ·	☐ Yes ☑ No
B. Well casing, top elevation	ft. MSL	a. Inside diame		12 in.
	n. MSL	b. Length:		Steel ☑ 04
D. Surface seal, bottom ft. M	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Other 🗆 🌉
12. USCS classification of soil near screened GP GM GC GW SM SC ML MH GC M	SW Z SP 🗆	d. Additional p		Yes 🔼 No
Bedrock 🗆		3. Surface scal:		Bentonite 30 Concrete X 01
	Yes A No	<u> </u>	15	Other 🗆 🧼
14. Drilling method used: Re Hollow Stem A	uger 23 4 1	4. Maieriai Detwe	en well casing and protection	ve pipe: Bentonite D 30
	Other 🗆 🎎	<i>SA</i>		Other D
15. Drilling fiuid used: Water ☐ 0 2 Drilling Mud ☐ 0 3	Air □ 01		l mud weight Bentonite	-sand slurry □ 35
	Yes M No	d % Bent	1 mud weight Bento onite Bentonite-co ? ¹³ volume added for any o	ement grout 🗆 50
Describe		f. How installe	: d:	Tremie 🔲 01
17. Source of water (attach analysis, if req	uired):		Trem	uie pumped 🗍 02 Gravity 💆 08
Luck Municipal Water		6. Bentonite seal:		ite granules [] 33
E. Bentonite seal, top ft. MS	SL or _1.0 _ ft.	b. □1/4 in.	Ø3/8 in. □1/2 in. Ben	tonite chips 32 Other 32
F. Pine sand, topft. MS	Lor_9.50ft.		rial: Manufacturer, produc Flint #50	t name & mesh size
G. Filter pack, top ft. MS	Lor 9.75 ft.	b. Volume add	ed 0.03 ft ³	
H. Screen joint, top ft. MS	Lor_10.0 ft.	aKed	erial: Manufacturer, produc Flin + 3/32 - 3/16	
I. Weil bottomft_MS	Lar 20.0 ft.	b. Volume add 9. Well casing:	cd 2.9 ft ² Flush threaded PVC sch Flush threaded PVC sch	nedule 40 🔀 23
J. Filter pack, bottomft. MS	Lar 20.0 ft.		111	Other 🗆
K. Borehole, bottom ft. MS	Lor_23.0 ft.	10. Screen material a. Screen type:	F	actory cut 📈 11
L. Borehole, diameter 8.25 in.				Other 🗆 💥
M. O.D. well casing 2.06 in.		b. Manufacture c. Slot size: d. Slotted lengt		0.03 in.
N. I.D. well casing 1.89 in.		11. Backfill materia	II. I (below filter pack): 47 IVE	None 14
hereby certify that the information on this	form is true and correct to the be	est of my knowledge.		

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

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

Remediation/Rede	velopment [Other 🛛 <u>DE</u>	₹₽		
Facility/Project Name	County Name	Le minimum distrib	Well Name	~ ~	1
Laundry Basteel	tolk		1		J. III NEWS
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Nu	moer	DIKK W	ell ID Number
				<u> </u>	
1. Can this well be purged dry?	s 🔯 No		Before Dev	elopmen	t After Development
2. Can um won oc purgon my		11. Depth to Water		1.3.7	
2. Well development method	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(from top of	$1 - \frac{7}{2}$	1 3 ft.	71.5 n.
surged with bailer and bailed 4	1	well casing)			A state of the second
surged with bailer and pumped 🔲 6	1	The same of the same		•	3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3
surged with block and bailed 🔲 4	2	Date	19107	2120	1/ 09/07/2011 y y mm d d y y y y
surged with block and pumped X 6	2 - 100 (100 (100 (100 (100 (100 (100 (10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		• • •	• • • • •
surged with block, bailed and pumped 7			3 7.4	_□ a.m.	_4:45 a.m.
compressed air	-	Time c	· _ <u> </u>	_	_L: L ≥ 図 p.m.
bailed only 10 pumped only 5		12. Sediment in well	48	() inches	inches
pumped slowly	or a contract of	bottom		D_ menes	menes
Other D		13. Water clarity	Clear 1	0	Clear 20
	% Sector		Turbid 🖾 1		Turbid 25
3. Time spent developing well	() min.	腕 しょうし	(Describe)	r Karang Maring	(Describe)
			The Armyria		
4. Depth of well (from top of well casising) $\frac{20}{2}$.	Left.				
5. Inside diameter of well	6				
5. Inside diameter of well $\underline{2}$. $\underline{0}$	≥ in.		1 × 100		
6. Volume of water in filter pack and well				······································	•
casing 10	5 pai	10 2.00 2.00			
		Fill in if drilling fluids	were used an	d well is a	t solid waste facility:
7. Volume of water removed from well \(\sum_{\mathcal{Q}} \oldsymbol{Q}.	Ogal.			1	
	The state of the s	14. Total suspended _		mg/l	N(A mg/l
8. Volume of water added (if any)	O gal.	solids			_
9. Source of water added Lack Municipa	0	15 COD			$\mathcal{N} A$
9. Source of water added Luck / Junicipa	<u>u</u>	15. COD		mg/l	mg/l
Supply		16. Well developed by:	Nome (first la	et) and Fierr	
10. Analysis performed on water added?	Not No	First Name: Daris	1. The star	3 × 5	: Albrecht
(If yes, attach results)	Der 140	Lust Lame: Naul		Last Name	:: Albrecki
		Firm: MSA	•		
17. Additional comments on development:					
ILH INCHIN					•
HH HH HH			- 1 AW	A .	
100 gallons			•		
		· · · · · · · · · · · · · · · · · · ·			
Name and Address of Facility Contact /Owner/Responsible P	Party	I hereby certify that the	he above info	rmation is	true and correct to the best
First Lois Last Baldwin	,	of my knowledge.			
1 1 0:	#	7	. 1	11	//
Facility/Firm: The Laundry Baste	<u> </u>	Signature:	m U	their	RX
· The 11th CL	-		<u> </u>	recht	1
Street: 517 4 th 5t		Print Name: <u>Vari</u>	~ MI	recus	
city/State/Zip: Luck, WI 3442			1		
City/State/Zip: Luck, WI 3942	<u> </u>	Firm: <u>MS</u>	<u>H</u>	<u> </u>	

Waste Management [

	Vatershed/Wastewater Remediation/Redevelopment	Waste Management Other DERP	MONITORING WELL Form 4400-113A	L CONSTRU Rev. 7-98	JCTIO
	Local Grid Location of Well		Well Name	`	
LAUNDRY BUSKET	<u>r</u>	' Br fr. Br.	エル-	d	
Facility License, Permit or Monitoring No.	Local Grid Origin (esti		Wis. Unique Well No.	DNR Well I	D No.
Partie ID		N,ft, E. S/C/N	Date Well Installed	107120	
Type of Well Well Code 6 1 IJ	SW 1/4 of SW 1/4 of Se Location of Well Relative to	c. 28 T. 36 N.R. 17	Well Installed By: Na Geiss Soil		and Fin
Distance from Waste/ Enf. Stds. Source 50 ft. Apply	u Dupgradient s d Downgradient n	Sidegradient	Landon M		
A. Protective pipe, top elevation	fl. MSL	I. Cap and lock?		☐ Yes 🗵	No
B. Well casing, top elevation	ft MSL	2. Protective cover a. Inside diamete	· ·	_1	1 2 in.
C. Land surface elevation	ft_MSL	b. Length:		1	<u>1</u> _ft.
D. Surface seal, bottom ft. MS	1.00/09 July	c. Material:		Steel E	
12. USCS classification of soil near screen		d. Additional pro	Paritant	Other E	
GP GM GC GW S SM SC G ML MH C	W DZ SP 🗆	If yes, describ		☐ Yes 🔯	
Bedrock 🗆		3. Surface scal:		Bentonite Concrete	
13. Sieve analysis performed?	es Do No		A.	Other [*****
14. Drilling method used: Rots	ny □ 50	4. Material between	well casing and protecti		9 90000
Hollow Stem Au	ger 🗷 4 1			Bentonite 🗆	30
<u> </u>	her 🗆 🧎		Sand	Other 🖾	J 🌉
		5. Aπnular space se	al: a. Granular/Chippe	ed Bentonite 🗷	3 3 3
	Air □ 01		and weight Bentonite		
Dimmig Man Li U 3 N	one val 99		and weight Bento		
16. Drilling additives used?	es 🗷 No		ite Bentonite-co		50
the state of the s		KCC	volume added for any o	the above Tremie	
Describe		f. How installed		⊔ ic pumped ⊔	_ 、
17. Source of water (attach analysis, if requi	red):		·	Gravity □	
Luck Municipal Water	γ (6. Bentonite seal:	a. Bentoni	ite granules [33
		reco	3/8 in. □1/2 in. Ben		
E. Bentonite seal, topft. MSL	. or <u>L.O</u> ft.	/ c		Other 🛘	
P. Fine sand, top ft. MSL	or2\$5A.	Red Flin	l: Manufacturer, product + 場ちし	t name & mes	30000
3. Filter pack, top ft. MSL	or9.75A	b. Volume added			
I. Screen joint, top ft. MSL	or	a Red Flint b. Volume added	3/16-3/32"		sa size
. Well bottom ft. MSL	or 20.0ft.	9. Well casing:	Flush threaded PVC sci Flush threaded PVC sci	nedule 40 🖾	
Filter pack, bottomft. MSL	or?o.oft.	10. Screen material:	PVC	Other 🗆	· Carre
Borchole, bottom ft_MSL	or23.6ft	a. Screen type:	F	Tactory cut ⊠ nuous slot □	,
Borehole, diameter _8.15 in.			A	Other	
I. O.D. well casing _2.0 6 in.	A Company	b. Manufacturer c. Slot size: d. Slotted length:		0.03	
I. I.D. well casing		11. Backfill material (Nati	below filter pack):	None 🗆 Other 🔀	
hereby certify that the information on this fo	orm is true and correct to the				

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

Remediation/Redevelo		Other \ DERP_
	unty Name	Well Name
LAVNDRY BASKET	POIK	IW-2
Facility License, Permit or Monitoring Number Con	unty Code	Wis. Unique Well Number DNR Well ID Number
	49	
1. Can this well be purged dry?	Į No	Before Development After Development 11. Depth to Water
2. Well development method		(from top of a. 7.25ft. 7.28 ft. well casing)
surged with bailer and bailed 4 1 surged with bailer and pumped [] 6 1	i a a	100 Aug.
surged with bailer and pumped [] 61 surged with block and bailed [] 42		Date +09/07/20// 09/07/20/
surged with block and pumped \(\sqrt{1} \) 62		Date b. $\frac{0}{m} \frac{\int \int \frac{1}{\sqrt{2}} \frac{\partial f}{\partial y} \frac{\partial f}{$
surged with block, bailed and pumped 7 0		
compressed air		Time c3: 40 5 p.m. 5: 40 5 p.m.
bailed only		
pumped only	•	12. Sediment in well 16 0 inches 0 0 inches
pumped slowly	No.	bottom
Other		13. Water clarity Clear 口 10 Clear 反 20
		Turbid □ 15 Turbid □ 25
3. Time spent developing well	nin.	(Describe) (Describe)
4. Depth of well (from top of well casising) -20.2	ft.	
	\$ · · ·	
5. Inside diameter of well	in.	
6. Volume of water in filter pack and well casing	i o o	
	Par-	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well 10000	gal.	
	Tr.	14. Total suspended mg/l
8. Volume of water added (if any)	gal.	
1 (NA
9. Source of water added uck Municipal		15. COD mg/l mg/l
Supply		
		16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added? (If yes, attach results)	X No	First Name: Dan Last Name: Cervin
(it yes, attack results)	1	Firm: MSA-
17. Additional comments on development:		
44+11+1112111		
11 HA		
100 gallors		$x = x_0 + x_1 + \cdots + x_n + x_n + x_$
100 gallons		
and the second of the second o		
•		
Name and Address of Facilities		
Name and Address of Facility Contact/Owner/Responsible Party First Name: Last Name: Baldwin		I hereby certify that the above information is true and correct to the best of my knowledge.
T1. 1 1 R. 14		Signature: Hansel O C-
		-0
Street: 517 474 St.	<u> </u>	Print Name: DANEL O. CERUIN
City/State/Zip: Luck, WI 54421		Firm: MSA
<u> 2000 jili sa jak</u> a sa jalah		

-	Vatershed/Wastewater [_] Remediation/Redevelopment[_	Waste Management DERP	MONITORING WELL CONSTRUCTIO Form 4400-113A Rev. 7-98
acijity/Project Name	Local Grid Location of Well	. 1 ₂ - 1 ₂ - 1 ₃ - 1 ₄ - 1 ₄	Well Name
LAUNDRY BUSKET			JW 3
Recility License, Permit or Monitoring No.	Local Grid Origin [] (estim	ated: □) or Well Location □ Long. □ or	Wis. Unique Well No. DNR Well ID No.
acility ID	St. Planeft. N	I,ft. E. S/C/N	Date Well Installed 9/07/20/1
ype of Well	Section Location of Waste/Sor		m m d d y y y y Well Installed By: Name (first, last) and Fire
Well Code 61 / IJ	SW 1/4 of SW 1/4 of Sec.		Geiss bil + Samples
Distance from Waste/ Enf. Stds.		Sidegradient	Landon Malzahn
	d Downgradient n D	1. Cap and lock?	Yes X No
Protective pipe, top elevation		2. Protective cover	
. Well casing, top elevation	ft. MSL	a. Inside diameter	
Land surface elevation	ft. MSL	b. Length:	_ <u>[.o</u> ft.
		c. Material:	Steel 💆 04
. Surface seal, bottom ft. MS	K-2000-13-1		Other 🗆 🌉
12. USCS classification of soil near screen	`	d. Additional pro	— . · · · · · · · · · · · · · · · · · ·
	A St. CH. CH. CH. CH. CH. CH. CH. CH. CH. CH	If yes, describe	
Bedrock []		3. Surface scal:	Bentonite D 30
3. Sieve analysis performed?	es 🗷 No		Concrete ☑ 01 Other □
and the second s	ny ⊡ 50	4. Material between	well casing and protective pipe:
Hollow Stem Au			Bentonite □ 3.0
	her 🗆 🔛	SAND	Other 🗷
		5. Annular space ser	- Atrate
	Air 🗆 01		nud weight Bentonite-sand slurry [35
Drilling Mud 🗆 0 3 N	one 17/99		nud weight Bentonite slurry [31
6. Drilling additives used?	es X No		ite Bentonite-cement grout [50
			volume added for any of the above
Describe		f. How installed:	
7. Source of water (attach analysis, if requi	red):		Tremic pumped D 02 Gravity N 08
Luck Municipal Wa	ter	6. Bentonite seal:	Gravity 💢 0 8 a. Bentumite granules 📋 3 3
		KCC3	3/8 in. □1/2 in. Bentonite chips ☑ 32
Bentonite seal, top ft. MSI	orft	/ c	Other 🗋
Fine sand, topft. MSL	.or 2.55 R.		l: Manufacturer, product name & mesh size
Filter pack, topff. MSL	.or9.15 ft.	a. Ned Fli	nt #50
in the first of the state of th	> ■		al: Manufacturer, product name & mesh size
Screen joint, top ft. MSL	, ox _ 10.0 ft.	Bed FI	lint 3/32-3/16
Well bottom ft. MSL	or 20.0 ft	b. Volume added 9. Well casing:	Flush threaded PVC schedule 40 🗡 23
			Flush threaded PVC schedule 80 🔲 24
Filter pack, bottom ft. MSL	or 20.0 ft.		Other 🗆
Borchole, bottom ft_MSL	or 23.0 ft	10. Screen material:	PV C.
		a. Screen type:	Factory cut 🔼 11 Continuous slot 🔲 01
Borehole, diameter 2.35 in.			Other 🗆 🎆
O.D. well casing 2.06 in.	en e	b. Manufacturer c. Slot size:	Monoflex 0.03 in.
_	•	d. Slotted length:	ft.
L.D. well casing in.		11. Backfill material (

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., faiture 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

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

Route to: Watershed/Wastewater Remediation/Redevelopment	Wasie Management
	6LK 1 2W-3
Facility License, Permit or Monitoring Number County Cod 4 9	e Wis. Unique Well Number DNR Well ID Number
1. Can this well be purged dry?	Before Development After Development 11. Depth to Water (from top of a
2. Well development method surged with bailer and bailed 4 1	(from top of a
surged with bailer and pumped	Date $b \cdot \frac{\partial q}{\partial m} \frac{1}{\partial d} \frac{\partial q}{\partial y} \frac{1}{\partial y} \frac{\partial q}{\partial y} \frac{1}{\partial m} \frac{\partial q}{\partial d} \frac{1}{\partial y} \frac{\partial q}{\partial y} \frac{1}{\partial y}$
surged with block, bailed and pumped	Time c. 5:02 pm. 6:30 pm.
bailed only	12. Sediment in well 300 inches
Other □	13. Water clarity Clear □ 10 Clear □ 20 Turbid □ 15 Turbid □ 25
3. Time spent developing well	(Describe) (Describe)
5. Inside diameter of well 2 _ 6 in.	
6. Volume of water in filter pack and well	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well $\frac{000}{100}$ gal.	14. Total suspended mg/l,mg/l
8. Volume of water added (if any)	solids N/A 15. CODmg/lmg/l
	16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added? Yes No (If yes, attach results)	First Name: DAN Last Name: CERVIN Firm: WSA
17. Additional comments on development:	
Name and Address of Facility Contact/Owner/Responsible Party First Name: Baldwin	I hereby certify that the above information is true and correct to the best of my knowledge.
Pacility/Firm: The Laundry Basket	Signature: Maurel C
Street: 517 444 St	Print Name: DANIEZ O. CERVIN
City/State/Zip: Luck, WI 54421	Firm: MSA

	Vatershed/Wastewater	Waste Management Other DERP	MONITORING WELL CONSTRUCTIO Form 4400-113A Rev. 7-98
Recility/Project Name	Local Grid Location of Well	18 Table 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Well Name /
LAUNDRY BASKET	n H	N. A. DE.	TW-4
acility License, Permit or Monitoring No.	Local Grid Origin	ted: D) or Well Location	Wis. Unique Well No. DNR Well ID No.
A THE PARTY OF THE			
acility ID	かってき しゅうぎ さんばく し		Date Well Installed
acinty 1D	St. Planeft. N		Date Well Installed 9 109 12011
No. 12 St. State Control of the Cont	Section Location of Waste/Sou		m m d d v y y y
ypc of Well	SW1/4 of SW 1/4 of Sec.	28 T. 36 N.R. 17 日本	Well Installed By: Name (first, last) and Fire
Well Code 101 1 4-3	Location of Well Relative to W		Geiss Joilst Jamples
Distance from Waste/ Enf. Stds. Sourceft. Apply	u 🗆 Upgradient s 🗵	Sidegradient Not Known	Landon Malzahn
Protective pipe, top elevation	ft MSL	I. Cap and lock?	☐ Yes 🔯 No
r r r coccou o bibe' cob cic agron		2. Protective cover	
. Well casing, top elevation	ft MSL	a. Inside diameter	
		1	
Land surface elevation	ft.MSL	b. Length:	_/ <u>-O</u> _ft.
Commence of the second	Lor 1.0 ft	c. Material:	Steel 57 04
. Surface seal, bottom ft. MS		F. 30	Other 🗓 🌉
2. USCS classification of soil near screen		d. Additional pro	tection?
GP GM GC GW GS	W SE SP 🗆 🔪 🔠	If yes, describe	
GP GM GC GW S SM SC ML MH C Bedrock C	L CH CH CH		Bentonite □ 30
Bedrock 🗆		3. Surface scal:	
3. Sieve analysis performed?	es 25 No		Concrete 2 01
	12XI	`	Other 🛘
	пу 🖸 5 0	4. Material between	well casing and protective pipe:
Hollow Stem Au			Bentonite 🗆 30
Ot	her 🗆 🎆		Other E
·		5. Annular space sea	1: a. Granular/Chipped Bentonite X 33
	Air 🛘 01 🔛	RCD -	ud weight Bentonite-sand slurry ☐ 35
Drilling Mud 🗆 03 N	оле, 🔀 99		ud weight Bentonite slurry 31
the second secon			
6. Drilling additives used?	es 🗹 No		volume added for any of the above
		KXXI	
Describe		f. How installed:	Tremie 🗆 01
7. Source of water (attach analysis, if requi	red):		Tremie pumped 🔲 02
	TAXA		Gravity 🛛 08
Luck Municipal Water		6. Bentonite seal:	a. Bentonite granules [] 33
		b. □1/4 in. 💢3	/8 in. □1/2 in. Bentonite chips □ 32
Bentonite seal, topft. MSI	or _ 1.0 ft.		Other 🗆 🎆
Fine sand, top ft. MSI	or_ 9.554t.	ma /	: Manufacturer, product name & mesh size
	1000 1 1	/ a Red 7	71int #50
Pilter pack, topft. MSL	or 9.75 ft.	b. Volume added	0.03 ft3
A SECTION OF THE SECT			il: Manufacturer, product name & mesh size
· ·	or 10.0 ft.	a Redflin	+ 3/37-3/16
Craft Care	or 20.0 ft.	b. Volume added	2.9 ft ³
Well bottom ft. MSL	or	9. Well casing:	Flush threaded PVC schedule 40 💆 23
	20.0		Flush threaded PVC schedule 80 🔲 24
Filter pack, bottom ft. MSL	or 20.0 ft.	例 🔪	Other 🗆 💹
		10. Screen material:	PVC .
Borchole, bottom ft. MSL	or 23.0 ft.		
		a. Screen type:	Factory cut 2 11
Borchole, diameter8.25 in		2 (Continuous slot
Borehole, diameterim.		\	Other 🗆 🧱
~ _1		b. Manufacturer _	Monoflex
O.D. well casing 2.06 in.		c. Slot size:	0. 03 in.
		d. Slotted length:	_10.Oft
(D) (I		11. Backfill material (
ID well casing [10] :			AND THE PARTY OF T
I.D. well casing 1.89 in.			
1D. well casing in. reby certify, that the information on this for			

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

Remediation/Redevelopment] Other DERP
Facility/Project Name County Name	e polk Well Name TW-4
LAUNDRY BUSKET	
Facility License, Permit or Monitoring Number County Code	Wis. Unique Well Number DNR Well ID Number
1. Can this well be purged dry?	Before Development After Development
	11. Depth to Water 0 40
2. Well development method surged with bailer and bailed 4 1	(from top of a 1.42 ft. 1.40 ft. well casing)
surged with bailer and pumped	
surged with block and bailed 42	Date 109/04/2011 09/04/201
surged with block and pumped A 62	Date $\frac{0.09}{m m} \frac{1.09}{d} \frac{1.09}{y} \frac{0.09}{y} \frac{1.09}{y} $
surged with block, bailed and pumped 70	a i Asm. Dam.
compressed air	Time c. 9:20 2 a.m. 10:50 2 p.m.
bailed only	
pumped only 📋 51	12. Sediment in well \(\sum_{\overline{\infty}} \overline{\infty}
pumped slowly	bottom
Other 🗆	13. Water clarity Clear 📋 10 Clear 🖄 20
	Turbid ☑ 15 Turbid □ 25
3. Time spent developing well	(Describe) (Describe)
100 A	
4. Depth of well (from top of well casising) -20.2 ft.	
5. Inside diameter of well 2 _ 6 in.	
5. Inside diameter of well ≥ . ○ ≥ in.	
and the second s	
6. Volume of water in filter pack and well casing	
casing $-\frac{1}{2} \cdot \frac{0}{2} \cdot \frac{5}{2}$ gal.	7717 1- 16 3-1111 - 61-13 3 3 11 1 6 6
7. Volume of water removed from well	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water femover from wen 4 gai.	14. Total suspended mg/l mg/l
8. Volume of water added (if any)	solids mg/1
9. Source of water added	15. COD mg/l mg/l
	15. COD
Luck Municipal Water	16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added? Yes No	First Name: Davin Last Name: Albrecht
(If yes, attach results)	
	Firm: MSA
17. Additional comments on development:	Pre-Development DTB = 19.82
14-114 14-1	Pre-Development DTB = 19.82
1711 - TT 1 - TT	
en e	
Name and Address of Facility Contact/Owner/Responsible Party	T
	I hereby certify that the above information is true and correct to the best
Name: Lois Last Baldwih	of my knowledge.
The I had t	Isimum Hari Albusht
Facility/Firm: / Ne Laundy Value	Signature: Dun White
Street: 517 4H St	De Albert
Street: <u>517 4M ST</u>	Print Name: Varin HIbrach
SIN/Space/Tim: Luck, WI 54421	Firm: M S A

R	/atershed/Wastewater emediation/Redevelopment	Waste Management ☐ Other ☑ DEKP	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
	Local Grid Location of Well	N. DE.	Well Name TW-5
LAUNDRY BASKET	r 🗀 🔭 🗖	sn w.	
Facility License, Pennit or Monitoring No.		ted: or Well Location or or or or	Wis. Unique Well No. DNR Well ID No.
Facility ID	St. Plane ft. N.		Date Well Installed 9/08/20/1
Name and the second	Section Location of Waste/Sou		mm dd y y y y
Type of Well	5W 1/4 of SW 1/4 of Sec.		Well Installed By: Name (first, last) and Fir
Well Code 61 1 TJ	Location of Well Relative to W	aste/Source Gov. Lot Number	Geiss Soilst Sample
Distance from Waste/ Enf. Stds. Sourceft. Apply	u 🗆 Upgradient s 🖂	Sidegradient	Landon Malzaha
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock?	☐ Yes 🗷 No
D Well and a few densities	ft. MSL	2. Protective cover p	•
B. Well casing, top elevation		a. Inside diameter	:in.
C. Land surface elevation	ft.MSL	b. Length:	ft.
D. Surface seal, bottom ft. MS	Lor _1.0_ ft.	c. Material:	Steel (12 0 4 Other 🗆
12. USCS classification of soil near screen		d. Additional pro	lection?
GP GM GC GW S'SM SC ML ML ML C	WA SP II	If yes, describe	
Bedrock 🗆		3, Surface seal:	Concrete 0 01
	es 🗷 No		Other 🗆 🦓
T	ry □ 50	4. Material between	well casing and protective pipe:
Hollow Stem Aug		SIA	Bentonite □ 30
	ier' D	100	Other 🛛
15. Drilling fluid used: Water □ 0 2	Air 🗆 01		a. Granular/Chipped Bentonite 33
	one 21 99	453	ud weight Bentonite-sand slurry □ 35
			ud weight Bentonite slurry 2 31
16. Drilling additives used?	es 🛛 No		te Bentonite-cement grout 🗆 50
The second of th		KDA	volume added for any of the above
Describe		f. How installed:	Tremie 🔲 01 Tremie pumped 🗎 02
17. Source of water (attach analysis, if require	red):		
Luck Municipal Water	žr 🔛	6. Bentonite seal:	a. Bentunite granules [] 33
			/8 in. □1/2 in. Bentonite chips □ 32
E. Bentonite seal, topft. MSL	or _ <u>f·O</u> _ft.	/ 6	Other 🗆 🎎
F. Fine sand, top ft. MSL	\ \ \\\\\\	7. Fine sand material	: Manufacturer, product name & mesh size Flint #50
G. Filter pack, topft. MSL	or 9.75 ft.	R	0.03 n ³
G. Filter pack, top ft. MSL		b. Volume added	•••
H. Screen joint, top ft. MSL	or _10.0_ft.	Bed 7	d: Manufacturer, product name & mesh size
I. Well bottom ft. MSL	or_20.0 ft.	b. Volume added 9. Well casing:	Z.9 ft 3 Flush threaded PVC schedule 40 🕱 23
		y, wen casing:	Flush threaded PVC schedule 40 23 Flush threaded PVC schedule 80 24
I. Filter pack, bottomft. MSL	от 20.0 ft.		Other 🛘 💹
	or_23.0 ft.	10. Screen material: _	PVC
K. Borehole, bottom ft. MSL	orn.	a. Screen type:	Factory cut 🔀 11
Borehole diameter 8.25 in		2	Continuous slot
		b. Manufacturer _	Mono Flex Other []
M. O.D. well casing _2.06 in.		c. Slot size:	0. <u>63</u> in.
V. I.D. well casing 1.89 in		•	
N. I.D. well casing in.		11. Backfill material (I	
hereby certify that the information on this fo	orm is true and correct to the be	st of my knowledge.	
Signature D Coll. 164	Firm MSA		

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 Remediation/Redevelopment	Waste Management Other DEKP
Facility/Project Name County Name	
Pacility License, Permit or Monitoring Number County Co.	
1. Can this well be purged dry?	11 Denth to Water
2. Well development method surged with bailer and bailed surged with bailer and pumped 6 1	(from top of a 7 21st. 7 23 st. well casing)
surged with block and bailed	Date b. $\frac{0}{m} \frac{9}{m} \frac{0}{d} \frac{8}{d} \frac{30}{y} \frac{11}{y} \frac{09}{m} \frac{08}{m} \frac{30}{d} \frac{1}{y} \frac{30}{y} \frac{1}{y} \frac{1}{y}$ Time c. $\underline{12} : \underline{05} \square \text{ s.m.}$ $\underline{130} \square \text{ s.m.}$
bailed only	12. Sediment in well Q . 5 inches O . O inches bottom
Other D	13. Water clarity Clear ☐ 10 Clear ☐ 20 Turbid ☐ 15 Turbid ☐ 25 (Describe) (Describe)
4. Depth of well (from top of well casising) 20.1 ft.	
5. Inside diameter of well 2.06 in.	
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 $\angle 0 \circ 0$ gal. 8. Volume of water added (if any) $\angle 5 \circ 0$ gal.	14. Total suspended mg/l mg/l
P. Source of water added	15. COD mg/l mg/l
Lycle Municipal Water	16. Well developed by: Name (first, last) and Firm
0. Analysis performed on water added? Yes No (If yes, attach results)	First Name: DAN First Name: DAN Last Name: TERELITY Firm: WSA
7. Additional comments on development:	
100 gallons	
fame and Address of Facility Contact/Owner/Responsible Party irst Last Name: Baldwin	I hereby certify that the above information is true and correct to the best of my knowledge.
acility/Firm: The Landy Bashet	Signature: Maris C
treet: 517 4th St	Print Name: DAVIER O. CERVIN
ity/State/Zip: Luck, WI 54421	Firm: aus4

-	Watershed/Wastewater Remediation/Redevelopment	Waste Management Other DELP	MONITORING WELI Form 4400-113A	L CONSTRUCTIO Rev. 7-98
Facility/Project Name_	Local Grid Location of Well		Well Name TW	-1
LAUNDRY BASKET			•	
Facility License, Permit or Monitoring No.	Local Grid Origin (estima	ated: []) or Well Location [] Longar	Wis. Unique Well No.	DNR Well ID No.
Facility ID	St. Planeft. N	î. E. S/C/N	Date Well Installed	0812011
ALL CHANGE	Section Location of Waste/Sou	iroe	in m	
Type of Well Well Code 6 1 1 IT	SW 1/4 of SW 1/4 of Sec. Location of Well Relative to W	28,T. 36 N.R. 17 W	Well Installed By: Nan	ne (first, last) and First st Sample
Distance from Waste/ Enf. Stds. Sourceft. Apply	u Downgradient n D	Sidegradient	Landon M	olzaha
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock?		Yes 🖟 No
B. Well casing, top elevation	ft.MŠĽ	2. Protective covér p		<u>/2</u> _in.
C. Land surface elevation	n.msl	b. Length:	en de la companya de La companya de la co	_1.O_ft.
D. Surface seal, bottom ft. MS	Lor _ LO_ft.	c. Material:		Steel XI 04 Other []
12. USCS classification of soil near screen	n: 255%	d. Additional pro	tection?	☐ Yes 😿 No
GP GM GC GW S SM SC ML MHO		If yes, describe		
Bedrock 🗆		3. Surface scal:		Bentonite □ 30 Concrete ☑ 01
	Yes Z No			Other 🗆 🌉
	ary □ 5 0	4. Material between	well casing and protective	
Hollow Stem Au	ther D			Bentonite □ 30
	ner L ***	<u> 54N)</u>		Other 🗹 🏬
15. Drilling fiuid used: Water □ 0 2	Air □ 01		il: a. Granular/Chipped	
	I DOOK		ud weight Bentonite-	
Dining Mad [1 03]	Tone 27 99		ud weight Bento	
16. Drilling additives used?	Yes 🕱 No		te Bentonite-ce	
D 7		f. How installed:		Tremie 0 01
Describe				ic pumped 🛭 02
17. Source of water (attach analysis, if requ	1 100			Gravity DY 08
Luck Municipal Wat	e/	6. Bentonite seal:	a. Bentonit	te granules [] 33
		b. □1/4 in. №3	8/8 in. 11/2 in. Bent	onite chips 🔲 32
E. Bentonite seal, topft. MS	L or _ 1.0 _ ft.	/ 0		Other 🛘 🎆
F. Fine sand, top ft. MSl	L or _9.5_ft.		: Manufacturer, product Flin + #50	t name & mesh size
G. Filter pack, top ft. MSl	Lor 9.75 ft.	b. Volume added		
H. Screen joint, top ft. MSI	Lor_10.0 ft.	8. Filter pack matering	al: Manufacturer, product Fig. 4 3/32-31	t name & mesh size
I. Well bottom ft. MSI	or 200 h	b. Volume added 9. Well casing:	Flush threaded PVC sch	
••		3. Wen casing.	Flush threaded PVC sch	
I. Filter pack, bottom ft_ MSI	or 90.0 €		D.U.C.	Other 🛮 🔛
K. Borehole, bottom ft. MSI	or_23.0 ft.	10. Screen material: _ a. Screen type:	F	actory cut 💢 11
L. Borehole, diameter				Other 🗆 💥
M. O.D. well casing 2.06 in.		b. Manufacturer _ c. Slot size:	Mono flex	0. <u>0</u> 3 in.
N. I.D. well cooks		d. Slotted length:	ing and product of the	/ <u>0.0</u> ft
N. I.D. well casing in.		11. Backfill material (I	helow filter pack): 171 VE	None 14 Other 2 2
I hereby certify that the information on this i	orm is true and correct to the be	st of my knowledge.		
Signature 7	7			•
- 1/000 (1/1/1/b)	$f = \int_{-\infty}^{\infty} MS$	4	•	

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

Remediation/Redevelopment	waste Management Other \\ \overline{\mathbb{Z} \overline{\mathbb{DERP}}
Facility/Project Name County Nam	ie Well Name
	and the second of the second o
Pacility License, Permit or Monitoring Number County Code	e Wis. Unique Well Number DNR Well ID Number
<u>49</u>	
1. Can this well be purged dry?	Before Development After Development 11. Depth to Water
2. Well development method	(from top of a 7 1 4 ft. 7 11 ft.
surged with bailer and bailed 41	well casing)
surged with bailer and pumped	
surged with block and bailed 42	Date 109 108 120 11 09 108 120 1
surged with block and pumped	Date $b \frac{O_{1}}{m} \frac{O_{2}}{d} \frac{O_{3}}{d} \frac{O_{4}}{y} \frac{O_{5}}{y} \frac{O_{7}}{y} \frac{O_{7}}{m} \frac{O_{7}}{d} \frac{O_{7}}{d} \frac{O_{7}}{y} \frac{O_{7}}{$
surged with block, bailed and pumped 70	
compressed air	Time c. 2:00 gp.m. 3:30 gp.m.
bailed only	
pumped only 🔲 51	12. Sediment in well 200 inches 0 inches
pumped slowly	bottom
Other	13. Water clarity Clear □ 10 Clear ☑ 20
, com	Turbid, ≤ 15 Turbid □ 25
3. Time spent developing well $\underline{q} \circ \underline{q} \circ \underline{q}$ min.	(Describe) (Describe)
4. Depth of well (from top of well casisng)	
5. Inside diameter of well 2 _ o 6 in.	
5. Inside diameter of well $\underline{\mathcal{A}} \cdot \underline{\mathcal{A}} = \underline{\mathcal{A}} = \underline{\mathcal{A}} \cdot \underline{\mathcal{A}} = \underline{\mathcal{A}} = \underline{\mathcal{A}} \cdot \underline{\mathcal{A}} = \underline{\mathcal{A}}$	
6. Volume of water in filter pack and well casing	
7. Volume of water removed from well	Fill in if drilling fluids were used and well is at solid waste facility: N/A
3. Volume of water added (if any)	14. Total suspended mg/l mg/l solids
P. Source of water added	15. COD mg/l mg/l
Luck Municipal Water	
44	16. Well developed by; Name (first, last) and Firm
0. Analysis performed on water added? Yes Y No (If yes, attach results)	First Name: DAN Last Name: CEPUIN DARIN Firm: MSA
7. Additional comments on development:	Tun. Wist
= 11- Redute	
5 gallon Buckets Well HM HM 1	Tous wells @ over or at 100g
pur	rous wells @ over or at 100g
ame and Address of Facility Contact/Owner/Responsible Party	
irst Lois Last Baldwin	I hereby certify that the above information is true and correct to the best of my knowledge.
cellity/Firm: The Lamely Basket	Signature: Hamifo (12
reet: 517 4th St	Print Name; DANIA O. CERU IN .
ity/State/Zip: Luck, WI 5442)	Firm: MCA

Facility/Project Name Local Grid Location of Well N. ft. E W. Well Name Facility License, Permit or Monitoring No. Local Grid Origin (estimated:) or Well Location Wis. Unique Well No. DNR Well ID No. Lat.		Watershed/Wastewater Remediation/Redevelopment	Waste Management Other DERP	MONITORING WELL CONST Form 4400-113A Rev. 7-5	
Pecifity Lorente Pecifity Continued	Facility/Project Name	Il ocal Grid Location of Well	04.01	Well Name	
Facility ID St. Plane	LAUNDRY BUSKET	A A	is:n dv.	IW-	
Type of Well Section	Facility License, Permit or Monitoring No.			Wis. Unique Well No. DNR We	il ID No.
Type of Well Well Code	Facility ID	St. Planeft. N	,ft. e. s/c/n	0910812	
Distance from Waster Co. ft. Apply d Dependent n Not Know Lock Mc 2 hard Not Know Not Know Lock Mc 2 hard Not Know Lock Mc L		SW 1/4 of SW 1/4 of Sec. 3	28 .T. 36 N.R. 17 🗒 🕏		
B. Well casing, top elevation	1	u □ Upgradient s □	Sidegradient Not Known		42
8. Well casing, top elevation	A. Protective pipe, top elevation	ft_MSL	1		s X No
D. Surface seal, bottom fi. MSL or 10 ft. 12. USCS classification of soil near screen: GP GM GC GW SW SW SP GA GASACTION of SW GASACTION of	B. Well casing, top elevation	ft.MSL	a. Inside diamete	r	
D. Surface seal, bottom	C. Land surface elevation	ft.MSL		The second secon	
SM SC ML MH CL CH SW S Bedrock Solid Bedro				Othe	7
SM SC ML ML MH CL CH CH Check Ender Section 13. Sieve analysis performed? Net Month 14. Drilling method used: Rotary 50 No Cherr Mallow Stem Auger 15. Drilling fluid used: Water 10 2 Air 10 1 Drilling Mud 10 3 None M 99 No Describe 15. Drilling additives used? Yes You No Describe 17. Source of water (attach analysis, if required): Lvck Municipal Well of the MSL or 9.50 ft. Fine sand, top ft. MSL or 9.50 ft. Secreen joint, top ft. MSL or 10.0 ft. Filter pack, bottom ft. MSL or 20.0 ft. Borchole, bottom ft. MSL or 23.0 ft. Borchole, diameter 8.25 in. LD. well casing 13. Surface seal: Seal: Sentonite 10. 30. Other 10. Since Mallow Mall		1 1 1	117		M No
13. Sieve analysis performed? Yes No No Other	SM □ SC □ ML□ MH□	CH C			: D 30
14. Drilling method used: Rotary 50 Hollow Stem Auger 541 Other 30		Yes 🗷 No	5. Surface scar:		******
Bentonite 30 Other 31 31 32 32 33 34 34 34 34 34		200	4. Material between		.D ****
Other		* I INVI		Bentonite	e □ 30
15. Drilling fluid used: Water 0 2 Air 0 1 Drilling Mud 0 3 None 9 9 16. Drilling Mud 0 3 None 9 9 16. Drilling additives used? Yes No Describe Termic pumped 0 2 Gravity 3 3 4 Gravit			SA	4 (1)	**********
1.5. Drilling fluid used: Water 0 2			5. Amular space se		
Continue					
16. Drilling additives used?	Drilling Mud 🗆 0 3 1	None 2799	mg.	•	•
Describe 17. Source of water (attach analysis, if required): Luck Municipal Water 18. Bentonite seal, top ft. MSL or 9.50 ft. 19. Filter pack, top ft. MSL or 9.75 ft. 10. Screen joint, top ft. MSL or 20.0 ft. Well boitom ft. MSL or 20.0 ft. Filter pack, bottom ft. MSL or 23.0 ft. Borehole, bottom ft. MSL or 23.0 ft. Borehole, diameter 2.0 ft. Luck Municipal Current and selection of the seal as Bentomite seal; as Bentomites seal	66 Thelling additions made	Vos sel No			
Tremie pumped 0 02 Gravity 10 08 6. Bentonite seal: a. Bentonite seal: a. Bentonite chips 0 32 b. Cl. W. W. H. C. P. W. H. S. or 10 ft. Bentonite seal, top ft. MSL or 9.50 ft. Fine sand, top ft. MSL or 9.75 ft. Fine sand, top ft. MSL or 10.0 ft. Screen joint, top ft. MSL or 10.0 ft. Well bottom ft. MSL or 20.0 ft. Borchole, bottom ft. MSL or 23.0 ft. Borchole, diameter 8.05 in. Borchole, diameter 8.05 in. O.D. well casing 189 in. Tremie pumped 0 02 Gravity 10 08 6. Bentonite seal: a. Bentonite chips 3 32 c. Other 1 3.3 6. D1/4 in. \$\sqrt{3}/8\$ in. \$\sqrt{1}/2\$ in. Bentonite chips 3 22 c. Other 1 3.2 7. Fine sand material: Manufacturer, product name & mesh size a. \$\sqrt{1}/1	16. Dining additives used?	1es M 140	e. <u>/.6</u> Ft	volume added for any of the above	•
17. Source of water (attach analysis, if required): Lyck Municipal Water Water Water	Describe		f. How installed:		
Screen joint, top ft. MSL or 1.0 ft.		tired):			
b. 1/4 in. 1/3/8 in. 1/2 in. Bentonite chips 3 2 C. Other 3 Fine sand, top ft. MSL or 9.50 ft. Filter pack, top ft. MSL or 9.75 ft. Screen joint, top ft. MSL or 10.0 ft. Well bottom ft. MSL or 20.0 ft. Borchole, bottom ft. MSL or 23.0 ft. Borchole, diameter 8.25 in. O.D. well casing 1.5 in. D. Manufacturer Monoflex Screen type: Factory cut 1.1 Continuous slot 0.1 in. D. Manufacturer Monoflex C. Slottsize: 0.03 in. Other 1.2 in. Bentonite chips 3.2 c. Other 1.2 in. Bentonite chips 1.3 in. Other 1.3 in.				Gravity	A 08
Elentonite seal, top ft. MSL or f	EVER PRIGHTEIPEL O		RO(A		
a. H. d. Flint #50 b. Volume added 0.03 fi³ 8. Filter pack material: Manufacturer, product name & mesh size a. Red. Flint #30 b. Volume added 0.03 fi³ 8. Filter pack material: Manufacturer, product name & mesh size a. Red. Flint #30 b. Volume added 2.9 fi³ 9. Well casing: Flush threaded PVC schedule 40 \$\frac{1}{2}\$ 2.3 Flush threaded PVC schedule 80 124 Flush threaded PVC schedule 80 124 Borchole, bottom ft. MSL or 23.0 ft. Borchole, bottom ft. MSL or 23.0 ft. Borchole, diameter 6. O.D. well casing ft. MSL or 23.0 ft. Borchole, diameter 6. O.D. well casing 1. 89 in. 1. Backfill material (below filter pack): None 14 Other 15 Other 16 D. Manufacturer Monoflex C. Slot size: 0.03 in. C. Slot size: 0.03 in. C. Slot size: 0.04 in. C. Slot size: 0.05 in. C. Slot size: 0	Bentonite seal, topft, MS	L orft	b. 11/4 in. 5/2		
b. Volume added	. Fine sand, top ft. MS	L or 9.50 ft.	1000		nesh size
Screen joint, top ft. MSL or 10.0 ft. b. Volume added 2.9 ft ³ 9. Well casing: Flush threaded PVC schedule 40 2.3 Filter pack, bottom ft. MSL or 20.0 ft. Filter pack, bottom ft. MSL or 23.0 ft. Borehole, bottom ft. MSL or 23.0 ft. Borehole, diameter 6.25 in. Other b. Manufacturer c. Slot size: d. Slotted length: 11. Backfill material (below filter pack): None 1 14 Other 14 None 1 14 Other 1 14	. Filter pack, topft. MS	Lor_9.75 ft.	b. Volume added		
Well bottom ft. MSL or 30.0 ft. Filter pack, bottom ft. MSL or 30.0 ft. Filter pack, bottom ft. MSL or 30.0 ft. Borchole, bottom ft. MSL or 33.0 ft. Borchole, diameter ft. MSL or 33.0 ft. Borchole, diameter Solution	. Screen joint, top ft. MS	Lor_10.0 ft	Red 7	7,4+ 3132-346	
Filter pack, bottom	Well bottomft_MS	Lor 20.0 ft.	9. Well casing:	Flush threaded PVC schedule 40	
Borchole, bottomft_ MSL or	Filter pack, bottomft. MS	Lor 20.0 ft.		Other	www.
Borehole, diameter Sid in. b. Manufacturer Monoflex c. Slot size: d. Slotted length: 1. D. well casing 189 in. 1. Backfill material (below filter pack): None 14 Other Monoflex Other Other Monoflex Other Monoflex Other Other Monoflex Other District Control of the Monoflex Other District C	Borchole, bottom	Lor 23.0 ft.		Factory cut	
I. O.D. well casing 2.06 in. c. Slot size: d. Slotted length: 70.01. I.D. well casing 1.89 in. 11. Backfill material (below filter pack): None 1.4	Borehole, diameter _8.25 in.			Other	7.
. I.D. well casing in. 11. Backfill material (below filter pack): None □ 14 Other ▷	O.D. well casing 2.06 in.		c. Slot size:	0.	
	. I.D. well easing in.		11. Backfill material (below filter pack): None	1 4
			~	7111 VE. 1 NRAF	

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

	vatershed/wastev temediation/Rede		Waste Management Other DERP
Facility/Project Name		County Name	Well Name
Facility License, Permit or Monitoring	T	POLK	
Pacility License, Permit or Monitoring	Number	County Code	Wis. Unique Well Number DNR Well ID Number
		49	
1. Can this well be purged dry?	☐ Yes	X No	Before Development After Development
A With development and A. of			11. Depth to Water 722 ft. 724 ft.
2. Well development method			well casing)
surged with bailer and bailed	□ 4		
surged with bailer and pumped		4.	
surged with block and bailed	□ 4		Date b $\frac{09}{m}$ $\frac{08}{d}$ $\frac{201}{y}$ $\frac{09}{y}$ $\frac{08}{y}$ $\frac{20}{y}$ $\frac{0}{y}$
surged with block and pumped	⊅ 6:		
surged with block, bailed and pr	-	597 B ± 14	Time c. <u>94</u> :05 2 mm. 5:30 2 mm.
compressed air	□ 20	0	Time c. <u>5 4</u> : <u>2 2 国 p.m : 50 国 p.m.</u>
bailed only	□ 1 (0	L. L. Sanna
pumped only	□ 5	1	12. Sediment in well 200 inches 100 inches
pumped slowly	□ <u>5</u> (Q	bottom
Other	0 🌉		13. Water clarity Clear 10 Clear 20 Turbid 15 Turbid 25
3. Time spent developing well		<u>5</u> min.	(Describe) (Describe)
	~ ~ ~	-0-	
4. Depth of well (from top of well casi	sng) = 20.	<u>U</u> ft.	
	~ ~		$\frac{1}{\sqrt{2}} \left(\frac{1}{\sqrt{2}} \frac{2}{\sqrt{2}} \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} \frac{2}{\sqrt{2}} \frac{1}{\sqrt{2}} \frac{1}$
5. Inside diameter of well	_2.0	in.	
And the second second second second		} **	
Volume of water in filter pack and w casing	/cll	. سی	
Cashig			Title 24 16 1.4151 6125
er 17 1	80 (o . I	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well		gai.	14. Total suspended \[\sum_{\infty} Amg/l mg/l \]
	ننح ي		
8. Volume of water added (if any)	_L\S.	gal.	solids
0.6			15. COD
9. Source of water added		<u> </u>	15. CODmg/lmg/l
Luck Municipal	Water	1	 The second control of the control of t
74× 77 × 77 × 77 × 77 × 77 × 77 × 77 ×	1 1 1		16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added	? 🔲 Yes	No No	First Name: Davin Last Name: A (brecht
(If yes, attach results)			
			Firm: MSA
17. Additional comments on developme	mt:	in in	
Med 114 Hr	1.	f 4-	1-1
	5	Dullar	ntial time was spent Trying
		1	more the sand in the well
		/10 re	more the fond in the well
		~~~	
James and Addison of Francisco Control of Control			no avail.
Name and Address of Facility Contact/Ov		arty	I hereby certify that the above information is true and correct to the best
First Last Name: Lo15 Name:	Baldwin		of my knowledge.
<del>,</del> / ,		/	Day H
acility/Firm: The Launda	y Basket	1	Signature: Jan allient
treet: 517 4th S7	<u></u>		Day Albert
treet: $SIT 4M SI$	<u> </u>		Print Name: Varia It brutt
City/State/Zip: Luck, WI	5442	/ 1	Firm: MSA
	are the second second	\$14 <u>9 14 18</u> 1	

	Watershed/Wastewater	Waste Management Other 5 the	MONITORING WELL CONSTRUCTIO Form 4400-113A Rev. 7-98
Facility/Project Name LAUNDRY BASKET	Local Grid Location of Well ft.	7.KY	Well Name TW- 8
Facility License, Permit or Monitoring No.	Local Grid Origin [ (estim	Long. Well Location   or	Wis. Unique Well No. DNR Well ID No.
Facility ID	St. Planeft. N	r, R.E. S/C/N	Date Well Installed  M m m d d y y y y  Well Installed By: Name (first, last) and Fire
Type of Well	Section Location of Waste/So		Well Installed By: Name (first, last) and Fire
Well Code 6/ JJJ	SW 1/4 of SW 1/4 of Sec.		Landon Malzahn
Distance from Waste/ Enf. Stds. Source 30 ft. Apply	Location of Well Relative to V u Upgradient s C d Downgradient n C	Sidegradient	Geiss Soil and Samples
A. Protective pips, top elevation	ft MSL	I. Cap and lock?	U Yes X No
A. Protective pipe, top elevation		2. Protective cover	pipe:
B. Well casing, top elevation	fLMSL	a. Inside diameter b. Length:	•
C. Land surface elevation	ft_MSL	c. Material:	Steel 🖾 04
D. Surface seal, bottom ft. MS	Reserved to the second	C. Matthat.	Other D
12. USCS classification of soil near screen	1 1	d. Additional pro	
GP GM GC GW SM SM SC MLD MH C	T CH	If yes, describe	Bentonite 🛘 30
Bedrock   13. Sieve analysis performed?	Yes 12/No	3. Surface scal:	Concrete 💆 01
	ary 50	A Material hydrogen	well casing and protective pipe;
Hollow Stem Av		4. Walcisal between	Bentonite   30
Honow Bush Ac	ther 15 Mills	SAN	
		27	a. Granular/Chipped Bentonite 33
15. Drilling fluid used: Water □ 02	Air 🗆 0 1		nud weight Bentonite-sand shurry 35
Drilling Mud 🗆 03 h	Tone 23 99		and weight Bentonite slurry [ 31
4 / 70 / 711			te Bentonite-cement grout 5 0
16. Drilling additives used?	res Dr No		volume added for any of the above
Describe	👹	f. How installed:	
17. Source of water (attach analysis, if requ	ired):	w 🗱	Tremie pumped 0 02
Lock Municipal Wat		& Doubouite and	Gravity 20 08  a. Bentunite granules 33
Dop distribution		6. Bentonite seal:	VO. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
E. Bentonite seal, top ft. MS	Lor_10_ft.	6	1/8 m. □ 1/2 m. Bentonite chips □ 32  Other □
F. Fine sand, topft. MSi	Lor_ 9.50 ft.		Manufacturer, product name & mesh size
G. Filter pack, topft. MSI	or 9.75 ft	a. Red F b. Volume added	7/inf #50 0.03 n3
	<b>→</b>		al; Manufacturer, product name & mesh size
H. Screen joint, top ft. MSI	Lor 10.0 ft.	-Red F	7/11/ 3/37-3/16 29 ft3
I. Well bottomft. MSI	or 20.0 ft.	b. Volume added 9. Well casing:	Flush threaded PVC schedule 40 23
	20.0		Flush threaded PVC schedule 80 🗆 24
•	or 20.0 ft.	10. Screen material:	PVC Other
K. Borehole, bottom ft. MSI	or _ 23.0 ft.	a. Screen type:	Factory cut 🛛 11
L. Borehole, diameter 8.25 in.			Continuous slot 🗆 01
		b. Mamufacturer	Monoflex
M. O.D. well casing 2.06 in.		c. Slot size: d. Slotted length:	0. 03 in. 10. 0 ft.
N. I.D. well casing		11. Backfill material (	
14. L.D. Well cashing m.	en e	VATI	
I hereby certify that the information on this I	orm is true and correct to the b	est of my knowledge.	
Signature alle M	Firm MS	Tr Control of the Con	

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and buresu. 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/Wastev Remediation/Rede	<del></del>	Other X DER	<del>-</del>	
Facility/Project Name	County Name	, a see a see a	Vell Name	<u></u>
LAUNDRY BUSKET	Po		IW-	. <del>-</del>
Facility License, Permit or Monitoring Number	County Code 49	Wis. Unique Well Numl	ber DNR We	il ID Number ———
1. Can this well be purged dry?	D No	11. Depth to Water		After Development
2. Well development method		(from top of a	7.6_9.ft.	7.72 a
surged with bailer and bailed   4	1	well casing)		
surged with bailer and pumped \( \bigcup 6	2 47 3		•	
surged with block and bailed   4		Date b/	191091201	1) 09/09/201
surged with block and pumped	121 <b>2</b>	m	nm'dd'yy	1) 09/09/20/ mm ddyyy
surged with block, bailed and pumped 🔲 7			; 150 a.m.	a Ki am.
compressed air	0	Time c	_ <i>_t:_l_0_</i> p.m.	_8:40 □ p.m.
bailed only	0			
pumped only	1	12. Sediment in well	L 4 o inches	
pumped slowly	Q.	bottom		
Other			lear 🔲 10	Clear 💢 20
			urbid 🖾 15	Turbid □ 25
3. Time spent developing well	0 min.	<b>(D</b>	escribe)	(Describe)
4. Depth of well (from top of well casising) $-\frac{20}{}$ .		<u> </u>		
5. Inside diameter of well	<u>6</u> in.			
6. Volume of water in filter pack and well casing/ 0	5 gal.		· · · · · · · · · · · · · · · · · · ·	
		Fill in if drilling fluids we	ere used and well is a	t solid waste facility:
7. Volume of water removed from well $-\frac{90}{2}$ .	_D gal.			~/ A
8. Volume of water added (if any)	<u>b</u> gal.	14. Total suspendedsolids	me/l	
9. Source of water added		15. COD	7 1 1	<b>\</b>
	<u> </u>	13. COD —	mg/l	mg/i
Luck Municipal Water	#	6. Well developed by: N	ama (first last) and Tirm	
10. Analysis performed on water added?	□ No	First Name: Dam		: Albreeld
(If yes, attach results)	and the second s	Firm: M&A	· · · · · · · · · · · · · · · · · · ·	
17. Additional comments on development:  18.83 DCB prod to  1111 WHHH-	Levelop	met		
-HIT WHIH-1 (11			•	
	160			
	30			· ·
Name and Address of Facility Contact /Owner/Responsible P	arty	I hereby certify that the of my knowledge.	above information is	true and correct to the best
lame: Name: Datawing  lacility/Firm: The Laundy Basket		Signature: 000	in allub	<u> </u>
irect: 517 4th St		rint Name:	Danh A	brecht
City/State/Zip: Luck, WI 5442/	<u> </u>	Tirm:	MSA	Trees,

# **APPENDIX B**

**Vapor Mitigation System Documentation** 



MSA Professional Services, Inc. Project: The Laundry Basket Main St

Luck WI 54853

Val Riedman Residential Mitigation Provider #103414RMT

2551 190th St Luck, WI 54853

Phone: 1-888-481-6870 715-554-0460 Cell 715-472-6870 Fax www.radonrx.com val@radonrx.com

August 17, 2011

# **Proposal:**

A soil communication test will be performed with an Infiltec digital manometer to determine pressure field extension to be expected from the proposed collection pits. Our experience has shown that -2.0 pa or -.008"WC is enough to satisfy seasonal changes in in stack effect in most buildings, thus this is our standard criteria for system design. Fan size will be based on flow rate from each collection pit. A report will be provided of initial readings from test holes with a shop vac and a second after the fans are operating.

#### Location #1:

Collection point will be located in the south store room at the original location of the dry cleaning machine. A pit will be dug according to soil conditions found and to amplify the soil communication from the pit across the slab area of the laundry area. A core hole is to be drilled by your company and perforated pipe is to be installed in our pit at the location of the dry-cleaning machine. A second pit will be installed behind the west bank of dryers in the store room. These 2 pits will be piped together and depressurized by a single fan mounted on the outside of the south wall of the building. The exhaust for this system will extend up 12" above the roof of this portion of the building.

#### Location #2:

Will be near the bottom of basement steps under the Scoops Ice Cream shop. The vent pipe will be routed through the storage shelves in the stairway to the basement and then to the attic. The fan for this system will be mounted in the attic and will discharge through the roof.

- All vents will have a varmint guard installed to protect the fan from hail stones, acorns and animals.
- Radonaway fans will be used and have a 5 year warranty. The system will be warranted for a period of 5 years.
- All pipes will be labeled in accordance with EPA standards and insulated in attics areas to reduce condensation and ice issues. A condensation bypass system will be included for the outside fan at location #1.
- Basement cracks, drains, and other openings will be sealed to maintain a negative pressure under the basement slab. This will also reduce the loss of conditioned air from the building.
- A manometer will be installed on a visible section of pipe to warn of system failure.

includes electrical work

This not a contract or an offer to enter into a contract. It is for our mutual convenience in considering a possible contract.

Sincerely,

Val Riedman

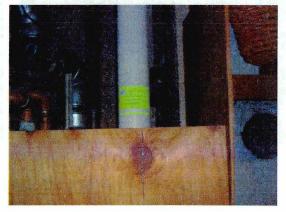
# Vapor Mitigation @ Laundry Basket Luck WI September 9, 2011



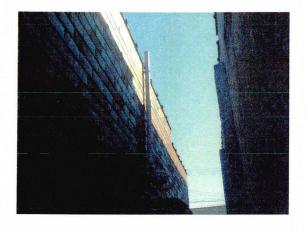


Suction point near dry cleaning equipment





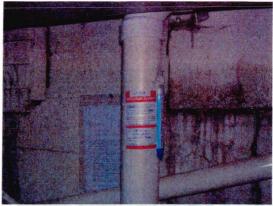
Piping to 2nd suction point located near Water heater @SE corner





Radonaway GP501 fan for both suction points in laundry area



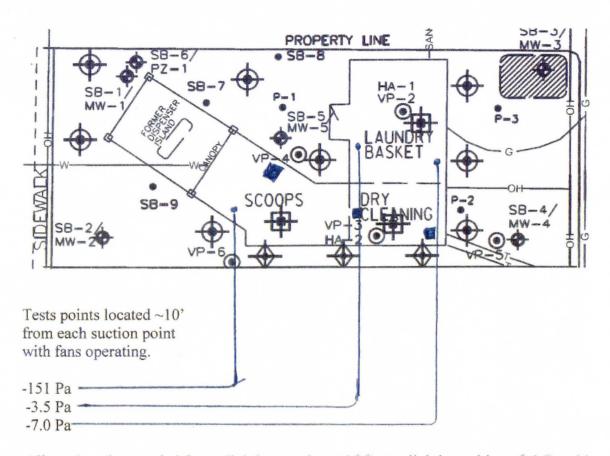


Suction point in the basement below the Scoop





Pipe passing through stairway closet and roof penetration

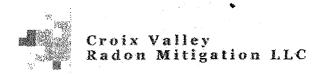


All test locations varied from slightly negative <.05 Pa to slightly positive <2.0 Pa with no suction applied. These readings varied due to open doors and dryers operating.

# 3 Suction Pits are indicated by

Fan locations are in the attic above the Scoop Ice Cream Shop and outside on the south side of the building near the former dry cleaning equipment.

2 Radonaway GP501 fans were installed both operating at ~3.5" WC



Vapor Mitigation System

Val Riedman Residential Mitigation Provider ≠103414RMT

2551 190th St Luck, WI 54853

Phone: 1-888-481-6870 715-554-0460 Cell 715-472-6870 Fax www.radonrx.com val@radonrx.com

# Principles of Operation and Maintenance of your System

Your system is designed to run continually in order to maintain a negative pressure beneath the basement floor. There is no regular maintenance required except to regularly check to see if the fan is operating. To do so simply view the manometer installed on the pipe to insure that it isn't reading zero. If it does read zero please follow the procedure listed below.

- 1. Make sure that the circuit to the fan is on. If this is the case the fan should be able to be heard running from near by.
- 2. If the fan is functioning but the manometer still reads zero, then there must be a blockage on the exhaust side of the fan.
- 3. During winter it is possibly that a build up of ice could plug the vent pipe and cause the system to stop working. This is usually a temporary event and it will clear by itself. If this problem occurs during warmer temperatures, check the outlet end of the vent for some other type of blockage.

# What if the manometer is reading higher than the initial pressure?

This can happen during the spring and after very wet periods. What might occur is that the water table could rise to a point under the intake pipe in the basement floor causing the fan not to be able to suction air properly from the soil. This would most likely be a temporary situation.

# What if the manometer is reading lower than the initial pressure?

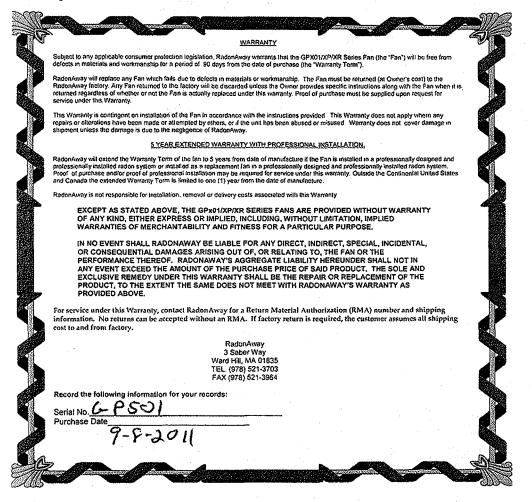
This would indicate that the fan is moving more air than before. It could indicate that there is a leak in the vent pipe below the fan or in the seal where the pipe enters the basement floor or sump basket. It could also mean that a major crack or opening has occurred near the suction point in the floor. Small fluctuations will occur due to the moisture content of the soil.

#### IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the GPx01/XP/XR Series Fan for shipping damage within 15 days of receipt. Notify RadonAway of any damages immediately. Radonaway is not responsible for damages incurred during shipping. However, for your benefit, Radonaway does insure shipments.

There are no user serviceable parts inside the fan. Do not attempt to open. Return unit to factory for service.

Install the GPx01/XP/XR Series Fan in accordance with all EPA standard practices, and state and local building codes and state regulations.



Radon Away.

# The World's Leading Radon Fan Manufaturer



# **GP/XP/XR Series Installation Instructions**

# Please Read And Save These Instructions

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN "OFF" POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

- WARNING! Do not use fan in hazardous environments where fan electrical system could provide ignition to combustible of flammable materials.
- 2. WARNING! Do not use fan to pump explosive or corrosive gases.
- 3. WARNING! Check voltage at the fan to insure it corresponds with nameplate.
- WARNING! Normal operation of this device may affect the combustion airflow needed for safe operation of
  fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
- NOTICE! There are no user serviceable parts located inside the fan unit. Do NOT attempt to open. Return unit to the factory for service.
- 6. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)" National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician.
- WARNING! Do not leave fan unit installed on system piping without electrical power for more than 48 hours.
   Fan failure could result from this non-operational storage.
- 8. WARNING TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:
- a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

# RadonAway

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#### 1.8 ELECTRICAL WIRING

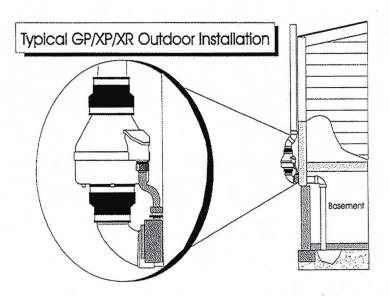
The GP/XP/XR Series Fans operate on standard 120V 60 Hz. AC. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a U.L. listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.

#### 1.9 SPEED CONTROLS

The GP/XP/XR Series Fans are rated for use with electronic speed controls however, they are generally not recommended. If used, the speed control recommended is Pass & Seymour Solid State Speed Control Cat. No. 94601-I.

#### 2.0 INSTALLATION

The GP/XP/XR Series Fan can be mounted indoors or outdoors. (It is suggested that EPA recommendations be followed in choosing the fan location.) The GP/XP/XR Series Fan may be mounted directly on the system piping or fastened to a supporting structure by means of optional mounting bracket.



#### 2.1 MOUNTING

Mount the GP/XP/XR Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration

#### 2.2 MOUNTING BRACKET (optional)

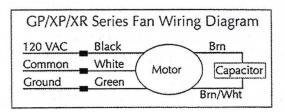
The GP/XP/XR Series Fan may be optionally secured with the integral mounting bracket on the GP Series Fan or with RadonAway P/N 25007-2 mounting bracket for an XP/XR Series Fan. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

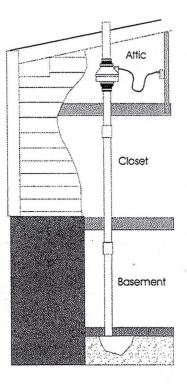
#### 2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as means of disconnect for servicing the unit and vibration isolation.

#### 2.4 ELECTRICAL CONNECTION

Connect wiring with wire nuts provided, observing proper connections (See Section 1.8):





#### 2.5 VENT MUFFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. connections. The muffler is normally installed at the end of the vent pipe.

#### 2.6 OPERATION CHECKS

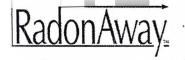
 Verify	all	connections	are	tight	and	leak-free.	

Insure the GP/XP/XR Series Fan and all ducting is secure and vibration-free.

Verify system vacuum pressure with manometer. Insure vacuum pressure is less than maximum recommended operating pressure (Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 Feet.) (Further reduce Maximum Operating Pressure by 10% for High Temperature environments)

Verify Radon levels by testing to EPA protocol.

See Product Specifications. If this is exceeded, increase the number of suction points.



#### INSTALLATION INSTRUCTION IN014 Rev H

XP/XR S	Series	GP Series			
XP101	p/n 23008-1	GP201	p/n 23007-1		
XP151	p/n 23010-1	GP301	p/n 23006-1		
XP201	p/n 23011-1	GP401	p/n 23009-1		
XR261	p/n 23019-1	GP501	p/n 23005-1		

#### 1.0 SYSTEM DESIGN CONSIDERATIONS

#### 1.1 INTRODUCTION

The GP/XP/XR Series Radon Fans are intended for use by trained, professional Radon mitigators. The purpose of this instruction is to provide additional guidance for the most effective use of a fan. This instruction should be considered as a supplement to EPA standard practices, state and local building codes and state regulations. In the event of a conflict, those codes, practices and regulations take precedence over this instruction.

#### 1.2 ENVIRONMENTALS

The GP/XP/XR Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32° F. or more than 100° F.

#### 1.3 ACOUSTICS

The GP/XP/XR Series Fan, when installed properly, operates with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the "rushing" sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

#### 1.4 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes thus blocking air flow to the GP/XP/XR Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff and falls upon shutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes allowing for return to normal operation.

#### 1.5 SLAB COVERAGE

The GP/XP/XR Series Fan can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the GP/XP/XR Series Fan best suited for the sub-slab material can improve the slab coverage. The GP & XP Series have a wide range of models to choose from to cover a wide range of subslab material. The higher static suction fans are generally used for tighter subslab materials. The XR Series is specifically designed for high flow applications such as stone/gravel and drain tile. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.6 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The GP/XP/XR Series Fan MUST be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The GP/XP/XR Series Fans are NOT suitable for underground burial.

For GP/XP/XR Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe	Minim	Minimum Rise per Foot of Run*					
Dia.	@25 CFM	@50 CFM	@100 CFM				
4"	1/8"	1/4"	3/8"				
3"	1/4"	3/8"	11/2"				



*Typical GP/XP/XR Series Fan operational flow rate is 25 - 90 CFM.

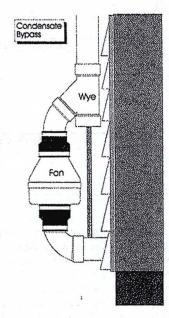
(For more precision, determine flow rate by using the chart in the addendum.)

Under some circumstances in an outdoor installation a condensate bypass should be installed in the outlet ducting as shown. This may be particularly true in cold climate installations which require long lengths of outlet ducting or where the outlet ducting is likely to produce large amounts of condensation because of high soil moisture or outlet duct material. Schedule 20 piping and other thin-walled plastic ducting and Aluminum downspout will normally produce much more condensation than Schedule 40 piping.

The bypass is constructed with a 45 degree Wye fitting at the bottom of the outlet stack. The bottom of the Wye is capped and fitted with a tube that connects to the inlet piping or other drain. The condensation produced in the outlet stack is collected in the Wye fitting and drained through the bypass tube. The bypass tubing may be insulated to prevent freezing.

#### 1.7 "SYSTEM ON" INDICATOR

A properly designed system should incorporate a "System On" Indicator for affirmation of system operation. A manometer, such as a U-Tube, or a vacuum alarm is recommended for this purpose.



# XP/XR SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the XP & XR Series Fan:

	0"		.5"	.75"	Vs Static St 1.0"	1.25"	1.5"		2,0"
V2104			00				in albert		
XPIUI	125	118	90	36	5	46	10	22 1 <b>=</b> 1 14 1	± - 11
XP151 XP201	180 150	.162 130	140 110	93	78 74	40	10	20	•
VD261	250	215	110	150	115	80	<i>5</i> 0	20	
AK201	20U	710	100	150	113	οŲ	. 50		*

	Maximum Recommended Operating Pressure*
XP101 XP151 XP201 XR261	0.9" W.C. (Sea Level Operation)** 1.3" W.C. (Sea Level Operation)** 1.7" W.C. (Sea Level Operation)** 1.6" W.C. (Sea Level Operation)**

*Reduce by 10% for High Temperature Operation *Reduce by 4% per 1000 feet of altitude

	7		ion @ 120 VAC			
XP101		 40 - 49	watts			
XP151		45 - 60	watts		150 - 100	* - +
XP201		45 - 66	watts			
XR261		 65 - 105	watts	e de la companya de	Carlotta et al carlot	

XP Series Inlet/Outlet: 4.5" OD (4.0" PVC Sched 40 size compatible)

XR Series Inlet/Outlet: 5.875" OD

Mounting: Mount on the duct pipe or with optional mounting bracket.

Recommended ducting: 3" or 4" Schedule 20/40 PVC Pipe

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Size: 9.5H" x 8.5" Dia.

Weight: 6 lbs. (XR261 - 7 lbs)

Continuous Duty
Thermally Protected
Class B Insulation
3000 RPM
Residential Use Only
Rated for Indoor or Outdoor Use





Tested to UL Std. 507

# **GP SERIES PRODUCT SPECIFICATIONS**

The following chart shows fan performance for the GP Series Fan:

	1.0"	Турі 1.5"	2.0 ⁿ	2.5"	uction "WC 3.0"	3.5"	4.0"	
GP501	95	87	80	70	57	30	5	
GP401 GP301	93 92	82 77	60 45	38 10	12	-	<b></b> • , , , ,	

Maximum Recommended Operating Pressure*							
GP501	3.8" W.C.	(Sea Level Operation)**					
GP401 GP301	3.0" W.C. 2.4" W.C.	(Sea Level Operation)** (Sea Level Operation)**					
GP201	1.8" W.C.	(Sea Level Operation)**					

*Reduce by 10% for High Temperature Operation

*Reduce by 4% per 1000 feet of altitude

Power Consumption @ 120 VAC									
GP501	70 - 140 watts								
GP401	60 - 110 watts								
GP301	55 - 90 watts								
GP201	40 - 60 watts								

Inlet/Outlet: 3.5" OD (3.0" PVC Sched 40 size compatible)

Mounting: Fan may be mounted on the duct pipe or with integral flanges.

Weight: 12 lbs.

Size: 13H" x 12.5" x 12.5"

Recommended ducting: 3" or 4" Schedule 20/40 PVC Pipe

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Continuous Duty
Class B Insulation
3000 RPM
Thermally Protected
Rated for Indoor or Outdoor Use





Tested to UL Std. 507

77728