November 1, 2017

Mr. John Sager
Wisconsin Department of Natural Resources
1701 N. 4th Street
Superior, WI 54880

Re: Replacement of Groundwater Extraction Well EXW-4 on Pine Street
Former Minocqua Cleaners State Lead Project, St. Germain Street., Minocqua, WI
WDNR BRRTs # 02-44-000052

Dear John:

This letter provides documentation for the WDNR file of the Minocqua Cleaners State Lead remediation project. The following information describes activities performed in 2017 for the replacement of groundwater extraction well EXW-4. This pumping well is located on Pine Street near the remediation system collection manhole and cascading weir that is used to treat pumped groundwater.

The well replacement was performed by MSA Professional Services (MSA) for the Wisconsin Department of Natural Resources (WDNR) under State of Wisconsin Purchase Order Contract 37000-0000004092. The activities followed the MSA scope of work letter that was dated March 14, 2017.

Background

Currently the site has two groundwater extraction wells that pump groundwater continuously and are operated by Lakeland Sanitary District. The two wells are designated EXW-4 and EXW-6. Well EXW-6 is located on the contamination source property on St. Germain Street. Well EXW-4 is located closer to Municipal Well #3 on Pine Street and was installed in 1987. In February 2017, it was determined by Lakeland Sanitary District staff that EXW-4 was damaged and pumping sand, and the extraction well was shut down on March 3, 2017. Subsequent discussions indicated the pumping well was still wanted to provide protection for Municipal Well #3 and also to assist with the remediation of the contaminant plume.

MSA was requested to obtain costs for the well replacement and abandon the failed well. The well installation contractor selected to perform the well replacement was Ertl Enterprises, Inc., dba/ Richardson Well Drilling, who previously installed the EXW-4 well pumps in 2013, and also performed other work at the site that was coordinated by Lakeland Sanitary District. The well replacement costs were included as subcontracted services in MSA's contract with the WDNR.

Field Activities for Replacing Well EXW-4

The following field activities were performed for the well replacement.

- A site visit was performed on April 13, 2017 to identify a new well location and determine any buried utility and street facility conflicts. The new well location was selected as close to the existing failed well as possible, and was selected at approximately 15 ft north of the existing well. During this site visit, MSA

collected a VOC sample from the existing well EXW-4 after meeting with Cully Akey of Lakeland Sanitary District on April 14. The sample was collected from the sample port at the top of EXW-4 by temporarily starting the pump in the failed well, during which time it was confirmed the well EXW-4 was pumping sand.

- Ertl Enterprises, Inc. (dba/Richardson Well Drilling) was provided replacement well dimensions based on the existing failed well and screen depths. Richardson mobilized to the site with a Schram T450WS Rotadrill drill rig on May 7, 2017, and completed drilling the replacement well borehole to 90 ft below grade. Drill cutting samples were collected every 5 ft during drilling for the construction log. The drill samples generally encountered sand from surface to 35 ft below ground surface (bgs), and sand with gravel to a depth of 90 ft bgs, consistent with glacial outwash deposits in the area. The new well was installed with 60 ft of stainless steel 10 slot well screen (screened from 87 ft to 27 ft), with a 5 inch PVC riser to the height of the above grade well stickup. #40 Red Flint gravel pack was installed via pumping through a tremie pipe with the filter pack mixed with water prior to tremie pumping to a depth of 25 ft bgs. The filter pack was installed on May 7 and allowed to settle overnight.

- On May 8, Richardson Well Drilling installed additional filter pack and a bentonite slurry annular seal. The new well was surged with a surge block, followed by installation of a submersible pump to develop the well. During development, pumping rates of 50 gpm were estimated with a pumping level of 31 ft below grade, and pumped water was discharged to Lakeland Sanitary District land adjacent to Well #3. MSA collected VOC samples during the well development at 830 AM and 1030 AM. Development pumping was stopped after 6.5 hours and a continuous pumping of 35 to 75 gpm was achieved during the development period. Pumping water levels of 29.3 to 30.5 ft below grade were measured during the development period. Photos of the new well installation are attached. The Well Construction Report (form 3300-077A) completed by Richardson is also attached.

- The existing failed well EXW-4 was abandoned after removing the pump by using 48 bags (2,400 lbs) ¾ inch bentonite chips from well depth of 75 ft to the ground surface. The old well casing was cut off by Richardson Well Drilling. The well/borehole filling and sealing Form 3300-005 is attached.

- An inspection visit was performed on May 25, 2017 after the electric service and pump had been installed, and the piping reconnected to the existing header pipe leading to the collection manhole. A VOC sample was collected from the new pumping well (sample EXW-4-3) on May 25 for a sample collected after the well pump is installed and connected to the collection header piping. The sample detected TCE at 2.5 ug/L, and cis-1,2 DCE at 3.3 ug/L.

- The new well EXW-4 documentation prepared by Richardson Well Drilling and provided to MSA are attached to this letter report. Photographs taken during the well installation are also attached. The next semi-annual groundwater sample event is scheduled for October 30 and 31, 2017, and will include collecting VOC samples from both EXW-4 and EXW-6.

Closing Remarks

Please contact me at (608) 355-8901 if you have any questions regarding the documentation. Thank you for allowing MSA to assist the Department with this project.

Sincerely,

MSA Professional Services, Inc.

Richard Lyster, P.G.
Project Manager

RSL:
Enc.
cc: File 8267043

List of Attachments:

Well construction Form for EXW-4, Abandonment form for EXW-4
Photos of Well Replacement
Lab Report for May 25, 2017 EXW-4 Sample During Pumping.

John Sager, WDNR
Minocqua Cleaners
Replacement of Well EXW-4
November 1, 2017

Forms for Well EXW-4

Well Construction Report

WISCONSIN UNIQUE WELL NUMBER: YA 323

State of WI - Private Water Systems-DG/5
Department of Natural Resources, Box 7921
Madison, WI 53707

Form 3300-077A (R 7/10)

Property Owner: LAKELAND SANITARY DISTRICT	Telephone Number ( )
Mailing Address: PO Box 289	
City: MINOCQUA	State: WI Zip Code: 54548
County of Well Location: ONEIDA	Co. Well Permit No. W	Well Completion Date (mm-dd-yyyy): 05-09-2017
Well Constructor (Business Name): Richardson Well	License #: 315	Facility ID Number (Public Wells)
Address: 10632 HWY 70 W	Well Plan Approval #
City: Minocqua, WI. State:	Zip Code: 54548	Date of Approval (mm/dd/yyyy)
Hicap Permanent Well #	Common Well #	Specific Capacity gpm/ft

1. Well Location

☑ Town ☐ City ☐ Village of MINOCQUA | Fire # (If avail.)

Street Address or Road Name and Number: Pine St

Subdivision Name | Lot # | Block #

Gov't Lot # 6 or 1/4 of 1/4 of Section 14, T 39 N; R 6 ☐E ☐W

Latitude Deg. 45 Min. 56016 DD

Longitude Deg. 089 Min. 70221

2. Well Type ☐ New ☑ Replacement ☐ Reconstruction (see item 12 below)

Lat/Long Method: GPS 008

of previous unique well # EXW-4 constructed in 1987

Reason for replaced or reconstructed well? pumping sand

☑ Drilled ☐ Driven Point ☐ Jetted ☐ Other

3. Well serves 1 # of _____ (For example: home, barn, restaurant, church, school, industry, etc.)

High Capacity: Well? ☐ Yes ☑ No Property? ☐ Yes ☑ No

4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties? ☑ Yes ☐ No (If no, explain on back side.)

Well located within 1,200 feet of a quarry? ☐ Yes ☑ No If yes, distance in feet from quarry: _____

Well located in floodplain? ☐ Yes ☑ No

Distance in feet from well to nearest: (include proposed)

- ___ 1. Landfill
- ___ 2. Building Overhang
- ___ 3. Septic ☐ Holding Tank ☐
- ___ 4. Sewage Absorption Unit
- ___ 5. Nonconforming Pit
- ___ 6. Buried Home Heating Oil Tank
- ___ 7. Buried Petroleum Tank
- ___ 8. Shoreline ☐ Swimming Pool ☐
- ___ 9. Downspout/Yard Hydrant
- ___ 10. Privy
- ___ 11. Foundation Drain to Clearwater
- ___ 12. Foundation Drain to Sewer
- ___ 13. Building Drain ☐ Cast Iron or Plastic ☐ Other
- ___ 14. Building Sewer ☐ Gravity ☐ Pressure ☐ Cast Iron or Plastic ☐ Other
- ___ 15. Collector Sewer: ☐ sanitary ___ units ___ in. diam. ☐ storm ☐ ≤ 6" ☐ > 6"
- ___ 16. Clearwater Sump
- ___ 17. Wastewater Sump
- ___ 18. Paved Animal Barn Pen
- ___ 19. Animal Yard or Shelter
- ___ 20. Silo
- ___ 21. Barn Gutter
- ___ 22. Manure Pipe ☐ Gravity ☐ Pressure ☐ Cast Iron or Plastic ☐ Other
- ___ 23. Other Manure Storage _____
- ___ 24. Ditch
- ___ 25. Other NR 812 Waste Source _____

5. Drillhole Dimensions and Construction Method

Dia.(in.)	From (ft.)	To (ft.)	Upper Enlarged Drillhole	Lower Open Bedrock
9	surface	87	☑ 1. Rotary - Mud Circulation	☐
			☐ 2. Rotary - Air	☐
			☐ 3. Rotary - Air and Foam	☐
			☐ 4. Drill-Through Casing Hammer	
			☐ 5. Reverse Rotary	
			☐ 6. Cable-tool Bit ____ in. dia.	☐
			☐ 7. Temp. Outer Casing ____ in. dia. Removed? ☐ Yes ☐ No - If no, explain on back side. ____ depth ft.	
			☐ 8. Dual Rotary	☐

8. Geology

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc.	From (ft.)	To (ft.)
	SAND	surface	35
	SAND & GRAVEL	35	87

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification Manufacturer & Method of Assembly	From (ft.)	To (ft.)
5"	PVC SDR 17 · 250 PSI	surface	27
	ASTM F480 · ASTM D2241		
	Cleaning.		
5 ft	Dia. (in.) Screen type, material & slot size: Milot 10-Slot	27	87

9. Static Water Level

____ ft. above ground surface

19.5 ft. below ground surface

11. Well Is:

12+ in. ☑ Above Grade ☐ Below

10. Pump Test

Pumping level 29.5 ft. below surface

Pumping at 50 GPM/GPH for 4 Hrs.

Developed? ☑ Yes ☐ No

Disinfected? ☑ Yes ☐ No

Capped? ☑ Yes ☐ No

7. Grout or Other Sealing Material

Method: Tremie

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
11lb/Gallon Bentonite Slurry	surface	25	
(Gravel pack if applicable) #40 Gravel	25	87	

12. Did you permanently abandon and fill all unused, noncomplying or unsafe wells on this property? ☐ Yes ☑ No If no, explain on reverse.

13. Signature of Well Constructor or Supervisory Driller: Michael A Heffron #700 Date Signed: 5/9/17

Print Name of Drill Rig Operator (Mandatory unless same as above) Date

Make additional comments on reverse side about geology, additional screens, water quality, etc.

Comments on reverse side ____ (CHECK √, IF YES) **Variance Issued** ☐ Yes ☐ No

Notification # 6774063301

DNR

Wisconsin Department of Natural Resources

Well / Drillhole / Borehole Filling & Sealing **Form 3300-005**

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

Verification. Check only if well filling & sealing was done previously and you are just verifying that work.: No

Date of Filling & Sealing: 05/12/2017 (mm/dd/yyyy)

1. Well Location Information

County:		WI Unique Well #:		DNR Hicap Well #:	
Oneida		EXW-4			
Latitude: (DD.DDDDD°)		**Longitude: (DD.DDDDD°)**		**GPS Method Code:**	
45.86814 °N		89.7023 °W		GPS008	
Qtr/Qtr:	**Quarter:**	**Section #:**	**Township #:**	**Range #:**	**Gov't Lot #:**
SW	NE	14	39 North	6 East	6
Well Street Address:				**Subdivision Name:**	
623 PINE ST					
Well City/Village/Town:		**Well Zip Code:**		**Lot #:**	
Town of MINOCQUA		54548			
Reason for Filling & Sealing:		**Does a new well replace this well?**		**WI Unique Well # of Replacement Well:**	
PUMPING SAND		Yes		YA323	

2. Facility / Owner Information

Facility Name:	FID #:	License/Permit/Monitoring #:
Original Well Owner:		
MINOCQUA WATER SUPPLY-DNR		
Present Well Owner:	**Mailing Address of Present Owner:**	
LAKELAND SANITARY DISTRICT	PO BOX 289	
City:	**State:**	**Zip Code:**
MINOCQUA	WI	54548

3. Well / Drillhole / Borehole Information

Well Type:	Original Construction Date:	Construction Type:	(specify Other):
Water Well	02/19/1987 (mm/dd/yyyy)	Drilled	REMEDIATION WELL
Formation Type:		**Total Well Depth From Ground Surface (ft.):**	
Unconsolidated Formation		75.00	
Casing Diameter (in.):	**Lower Drillhole Diameter (in.):**	**Casing Depth (ft.):**	

10.00		27.00
Was well annular space grouted?	**If yes, to what depth (ft.)?**	**Depth to Water (ft.):**
Yes	22.00	20.00

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

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

Required Method of Placing Sealing Material:	**(Explain Other):**
Screened & Poured (Bentonite Chips)	
Water Well Sealing Materials:	**For Monitoring Wells and other Drillholes:**
Bentonite Chips	

5. Material Used to Fill Well / Drillhole

Material:	From (ft.):	To (ft.):	# and Units of Sealant:	Mix Ratio or Mud Weight:
3/4" COARSE BENTONITE CHIPS	Surface	75.00	48 BAGS	

6. Comments

BOTTOM 12 FEET OF WELL WAS FILLED WITH SAND.

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing: RICHARDSON WD/ERTL ENTERPRISES INC	**License #:**	0315
10632 HWY 70 WEST MINOCQUA WI 54548	**Phone:** **Email Address:**	715-356-5321 RICHARDSONWELL@FRONTIER.COM

8. DNR Use Only

Signed On:	05/31/2017	**Received On:**	05/31/2017
Submitted By:	drill5321	**Approved On:**	

Photo Documentation

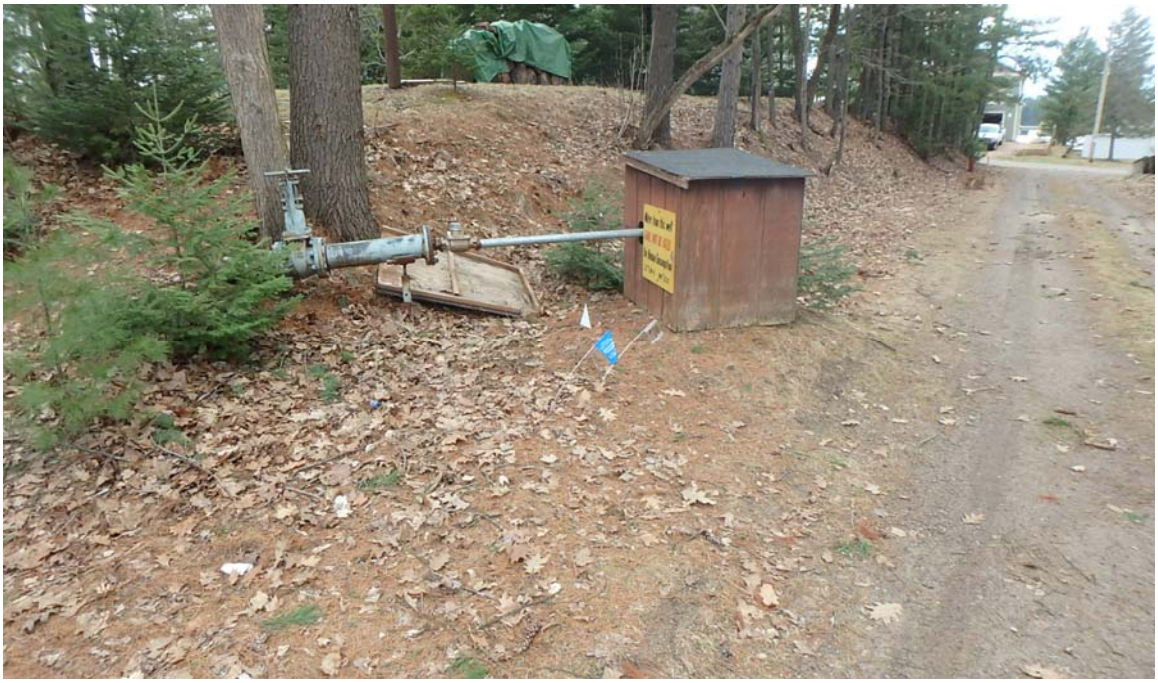

Photo 1 – Failed well EXW-4 in doghouse on April 14, 2017 prior to replacement. Pine Street in photo right.

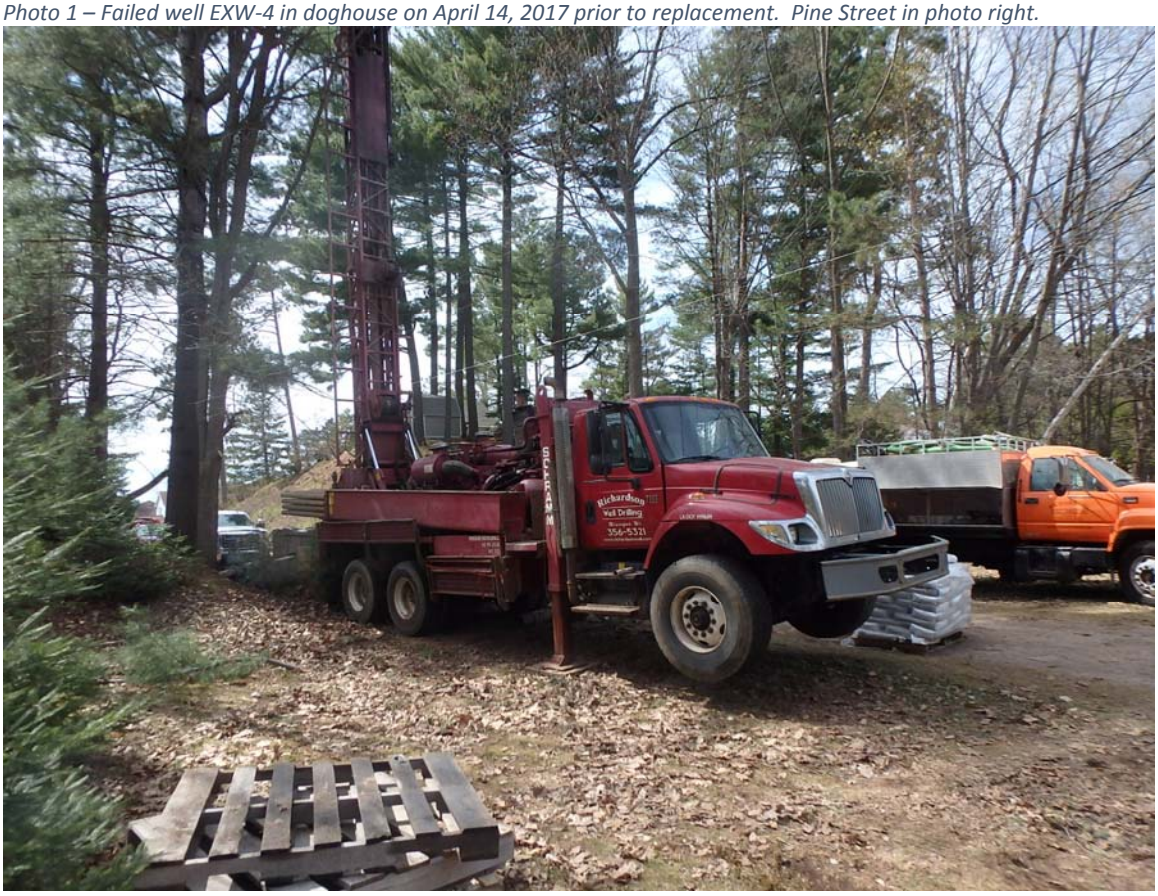

Photo 2 – Richardson Drilling installing new EXW-4 on May 7, 2017.

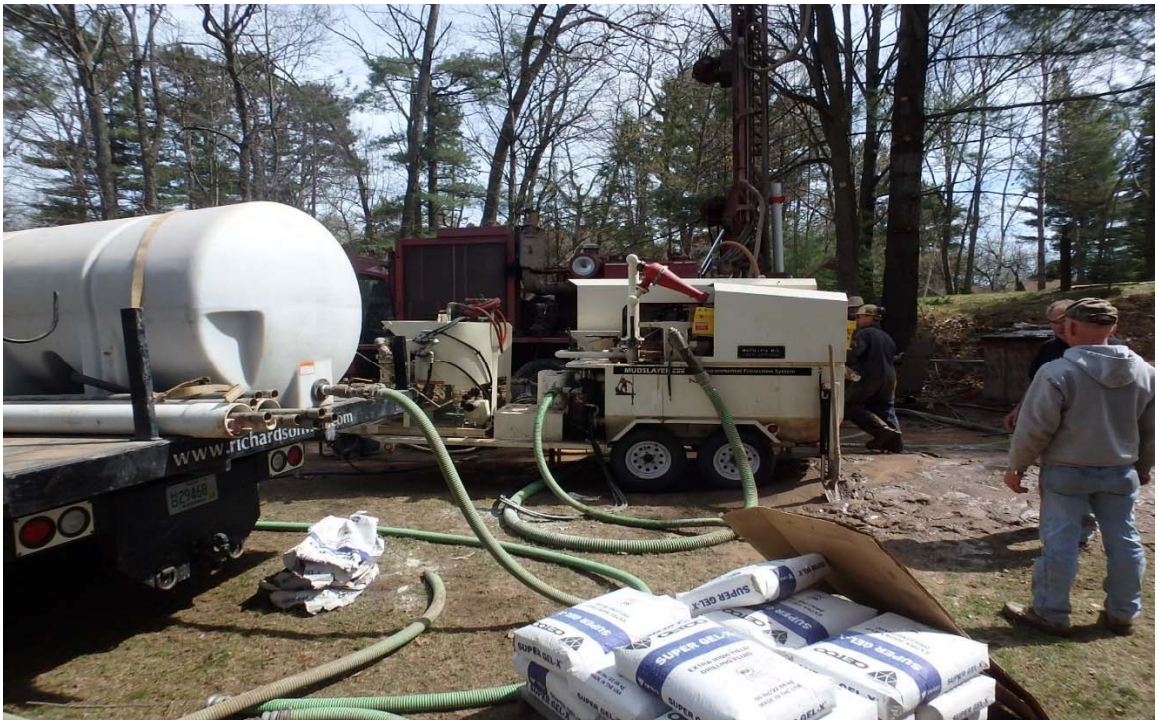

Photo 3 – Equipment for drill mud and borehole cuttings removal.

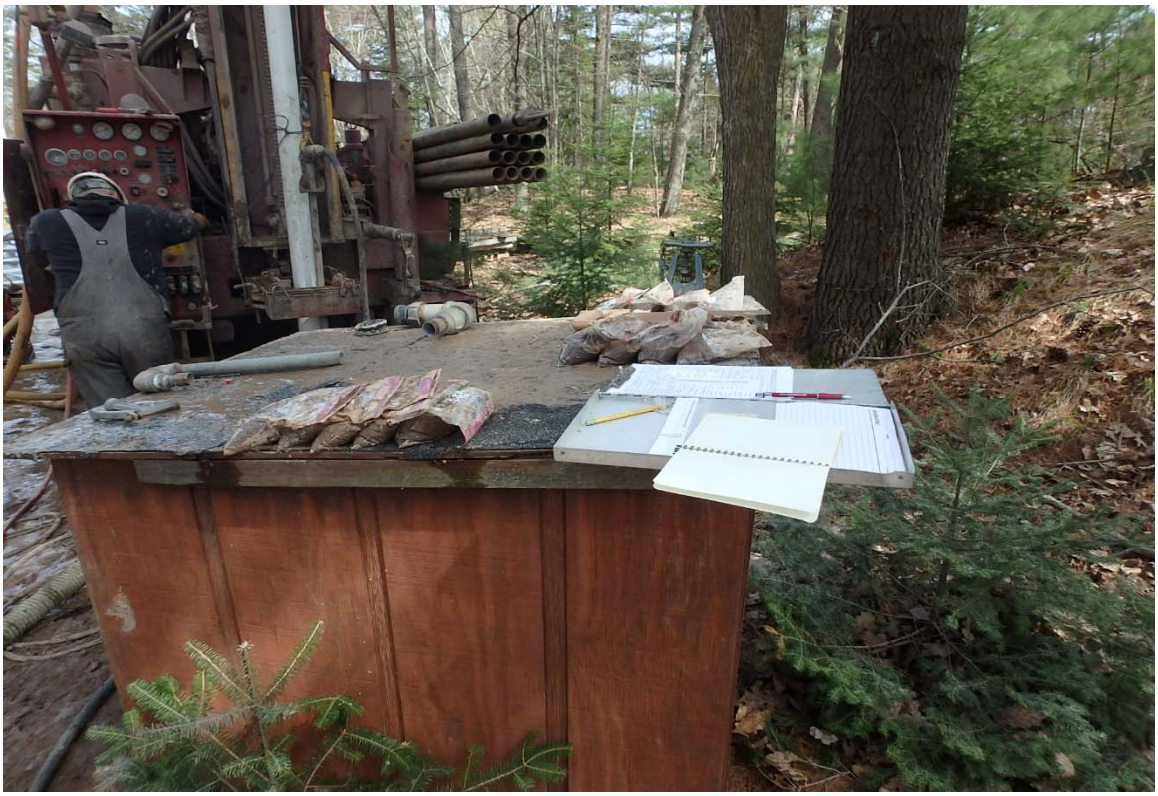

Photo 4 – Drill cuttings sampled every 5 ft during replacement well drilling on May 7, 2017.

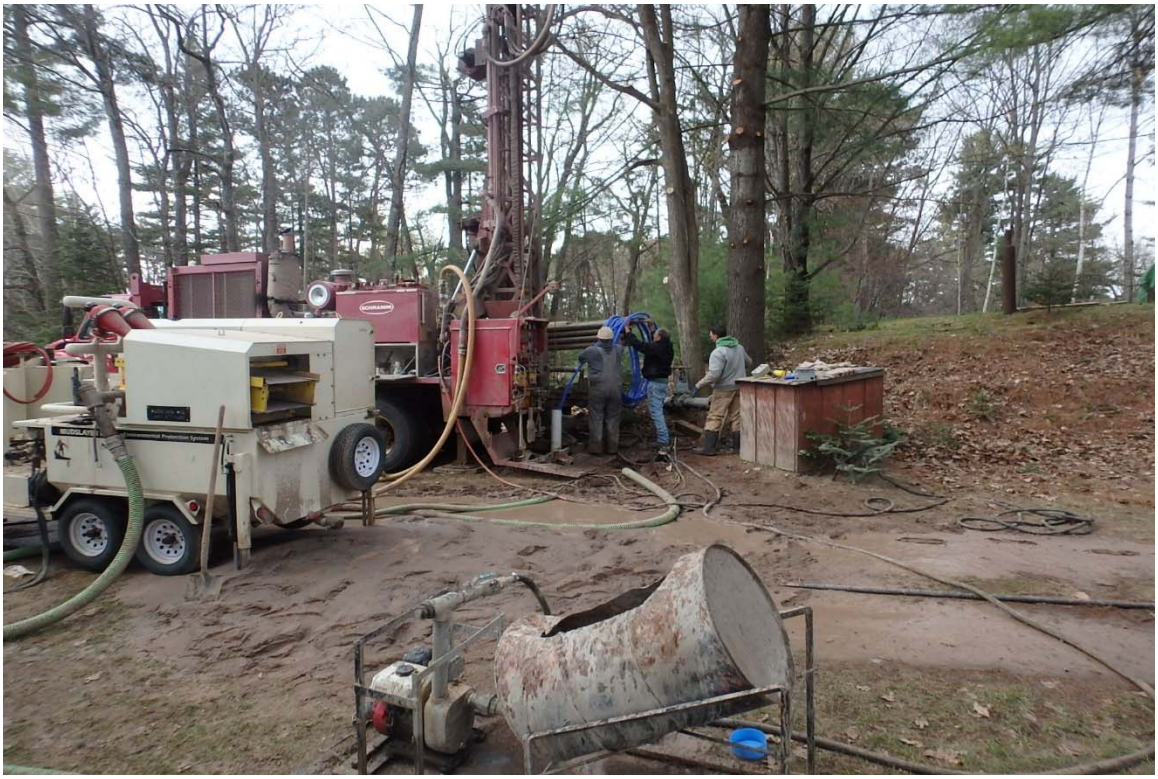

Photo 5 – Installing development pump after installation of filter pack using tremie pipe and mixing barrel.

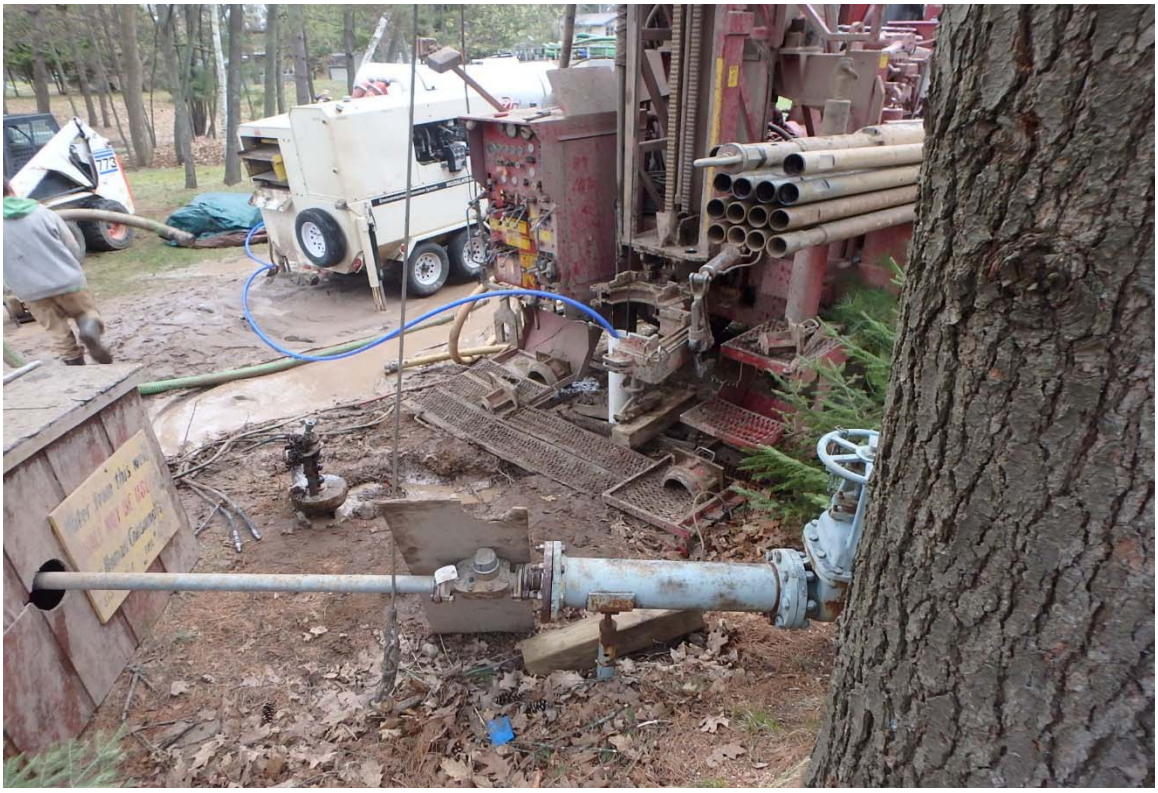

Photo 6 – Developing new well with submersible pumping, old well header pipe and flowmeter in foreground.

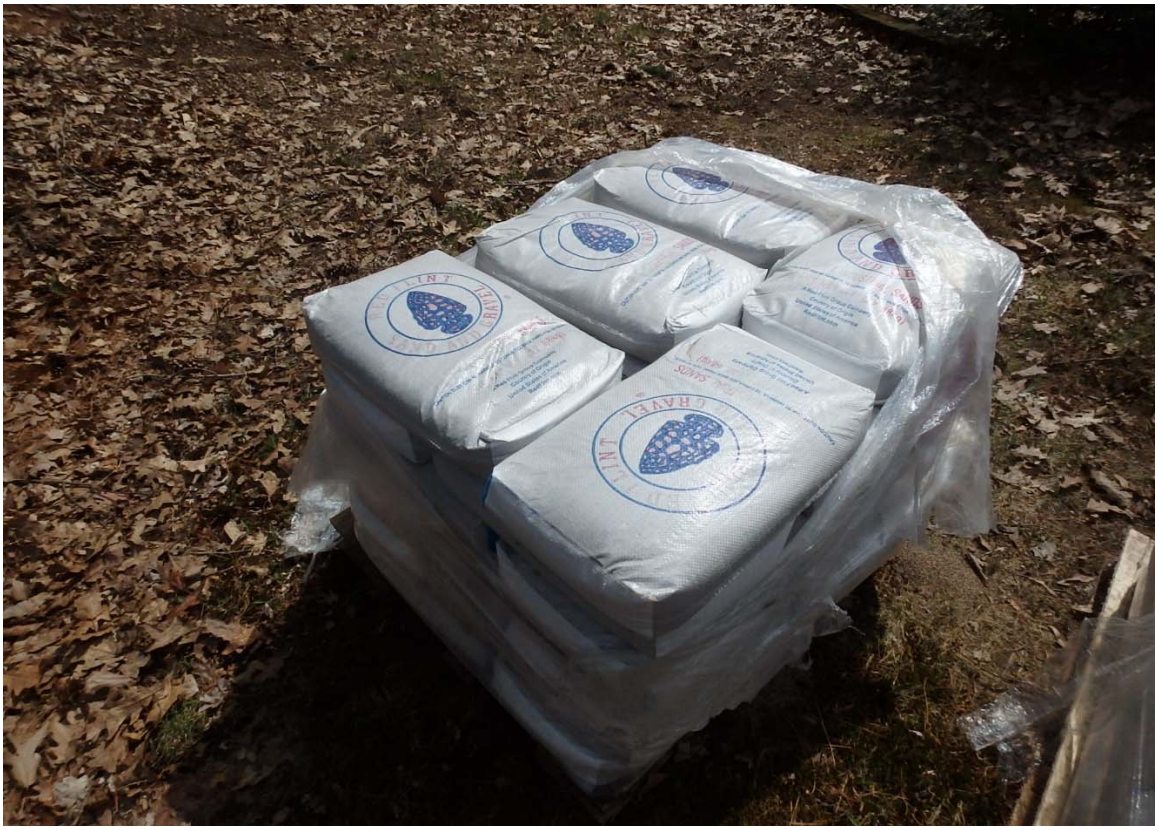

Photo 7 – Red Flint #40 used for filter pack.

Photo 8 – New well EXW-4 on May 25, 2017 with old well in background and prior to surface restoration.

Photo 9 – Abandoned failed well EXW-4 with bentonite chips prior to well stickup being cutoff.

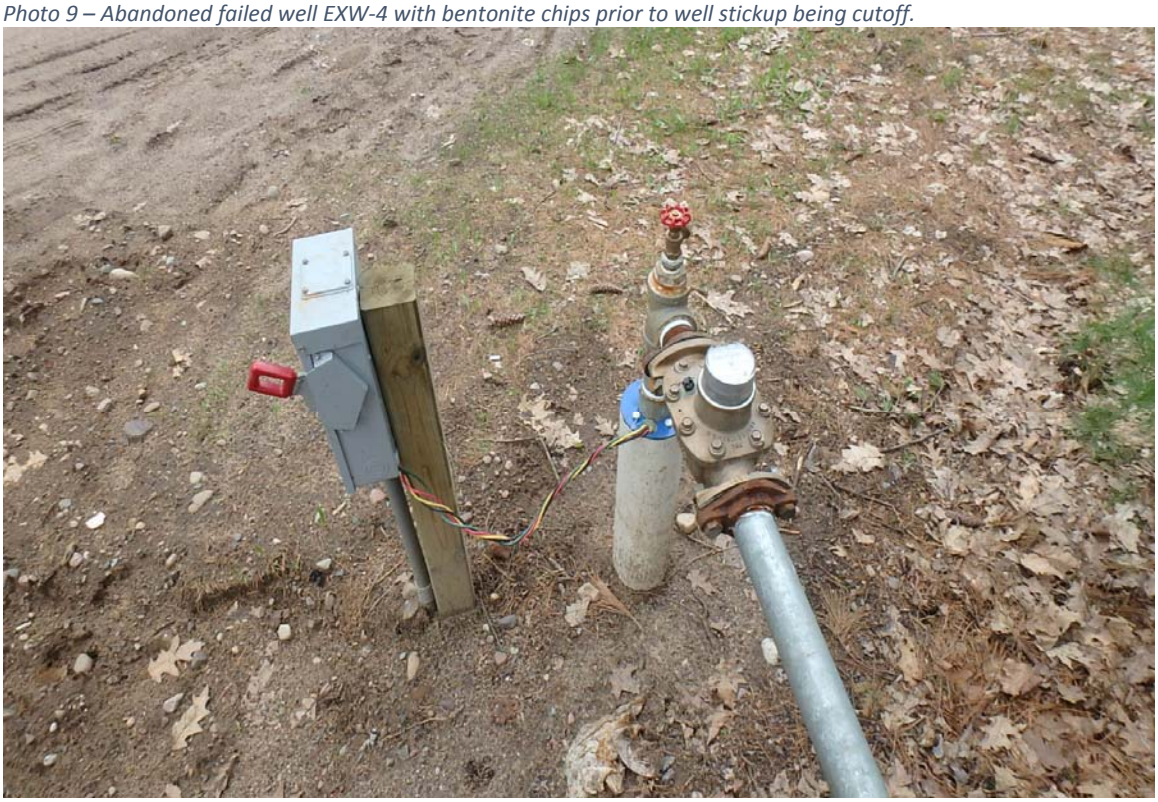

Photo 10 – New well EXW-4 with flowmeter and electrical service prior to placing doghouse over well.

Lab Report for May 25, 2017 EXW-4 Sample During Pumping

CT LABORATORIES
delivering more than data from your environmental analyses

CT Laboratories LLC • 1230 Lange Ct • Baraboo, WI 53913
608-356-2760 • www.ctlaboratories.com

ANALYTICAL REPORT

MSA PROFESSIONAL SERVICES
DICK LYSTER
1230 SOUTH BLVD
BARABOO, WI 53913

Project Name: MINOCQUA CLEANERS
Project Phase:
Contract #: 1269
Project #:
Folder #: 127664
Purchase Order #:

Arrival Temperature: See COC
Report Date: 06/12/2017
Date Received: 05/26/2017
Reprint Date: 06/12/2017

CT LAB Sample#: 872788 Sample Description: EXW-4-3 Sampled: 05/25/2017 0900

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results										
1,1,1,2-Tetrachloroethane	<0.60	ug/L	0.60	1.9	1			06/02/2017 07:14	AGK	EPA 8260C
1,1,1-Trichloroethane	<0.50	ug/L	0.50	1.8	1			06/02/2017 07:14	AGK	EPA 8260C
1,1,2,2-Tetrachloroethane	<0.70	ug/L	0.70	2.4	1			06/02/2017 07:14	AGK	EPA 8260C
1,1,2-Trichloroethane	<0.40	ug/L	0.40	1.5	1			06/02/2017 07:14	AGK	EPA 8260C
1,1-Dichloroethane	<0.30	ug/L	0.30	1.1	1			06/02/2017 07:14	AGK	EPA 8260C
1,1-Dichloroethene	<0.40	ug/L	0.40	1.5	1			06/02/2017 07:14	AGK	EPA 8260C
1,1-Dichloropropene	<0.70	ug/L	0.70	2.2	1			06/02/2017 07:14	AGK	EPA 8260C
1,2,3-Trichlorobenzene	<0.80	ug/L	0.80	2.6	1			06/02/2017 07:14	AGK	EPA 8260C
1,2,3-Trichloropropane	<0.60	ug/L	0.60	1.9	1			06/02/2017 07:14	AGK	EPA 8260C
1,2,4-Trichlorobenzene	<0.50	ug/L	0.50	1.7	1			06/02/2017 07:14	AGK	EPA 8260C
1,2,4-Trimethylbenzene	<0.40	ug/L	0.40	1.2	1			06/02/2017 07:14	AGK	EPA 8260C
1,2-Dibromo-3-chloropropane	<0.70	ug/L	0.70	2.4	1			06/02/2017 07:14	AGK	EPA 8260C
1,2-Dibromoethane	<0.60	ug/L	0.60	1.8	1			06/02/2017 07:14	AGK	EPA 8260C
1,2-Dichlorobenzene	<0.60	ug/L	0.60	1.9	1			06/02/2017 07:14	AGK	EPA 8260C
1,2-Dichloroethane	<0.26	ug/L	0.26	0.87	1			06/02/2017 07:14	AGK	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB Sample#: 872788 Sample Description: EXW-4-3 Sampled: 05/25/2017 0900

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
1,2-Dichloropropane	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
1,3,5-Trimethylbenzene	<0.40	ug/L	0.40	1.3	1			06/02/2017 07:14	AGK	EPA 8260C
1,3-Dichlorobenzene	<0.50	ug/L	0.50	1.8	1			06/02/2017 07:14	AGK	EPA 8260C
1,3-Dichloropropane	<0.50	ug/L	0.50	1.6	1			06/02/2017 07:14	AGK	EPA 8260C
1,4-Dichlorobenzene	<0.60	ug/L	0.60	2.0	1			06/02/2017 07:14	AGK	EPA 8260C
2,2-Dichloropropane	<0.50	ug/L	0.50	1.6	1			06/02/2017 07:14	AGK	EPA 8260C
2-Butanone	<4.0	ug/L	4.0	14	1			06/02/2017 07:14	AGK	EPA 8260C
2-Chlorotoluene	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
2-Hexanone	<7.0	ug/L	7.0	24	1			06/02/2017 07:14	AGK	EPA 8260C
4-Chlorotoluene	<0.40	ug/L	0.40	1.5	1			06/02/2017 07:14	AGK	EPA 8260C
4-Methyl-2-pentanone	<6.0	ug/L	6.0	19	1			06/02/2017 07:14	AGK	EPA 8260C
Acetone	<9.0	ug/L	9.0	30	1			06/02/2017 07:14	AGK	EPA 8260C
Benzene	<0.24	ug/L	0.24	0.81	1			06/02/2017 07:14	AGK	EPA 8260C
Bromobenzene	<0.60	ug/L	0.60	1.9	1			06/02/2017 07:14	AGK	EPA 8260C
Bromochloromethane	<0.80	ug/L	0.80	2.5	1			06/02/2017 07:14	AGK	EPA 8260C
Bromodichloromethane	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
Bromoform	<0.70	ug/L	0.70	2.3	1			06/02/2017 07:14	AGK	EPA 8260C
Bromomethane	<0.70	ug/L	0.70	2.4	1			06/02/2017 07:14	AGK	EPA 8260C
Carbon disulfide	<0.50	ug/L	0.50	1.6	1			06/02/2017 07:14	AGK	EPA 8260C
Carbon tetrachloride	<0.50	ug/L	0.50	1.6	1			06/02/2017 07:14	AGK	EPA 8260C
Chlorobenzene	<0.50	ug/L	0.50	1.5	1			06/02/2017 07:14	AGK	EPA 8260C
Chloroethane	<0.50	ug/L	0.50	1.6	1			06/02/2017 07:14	AGK	EPA 8260C
Chloroform	<0.30	ug/L	0.30	0.90	1			06/02/2017 07:14	AGK	EPA 8260C
Chloromethane	<0.70	ug/L	0.70	2.5	1			06/02/2017 07:14	AGK	EPA 8260C
cis-1,2-Dichloroethene	**3.3**	ug/L	0.30	1.0	1			06/02/2017 07:14	AGK	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB Sample#: 872788 Sample Description: EXW-4-3 Sampled: 05/25/2017 0900

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
cis-1,3-Dichloropropene	<0.40	ug/L	0.40	1.2	1			06/02/2017 07:14	AGK	EPA 8260C
Dibromochloromethane	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
Dibromomethane	<0.80	ug/L	0.80	2.5	1			06/02/2017 07:14	AGK	EPA 8260C
Dichlorodifluoromethane	<0.40	ug/L	0.40	1.5	1			06/02/2017 07:14	AGK	EPA 8260C
Diisopropyl ether	<0.29	ug/L	0.29	0.97	1			06/02/2017 07:14	AGK	EPA 8260C
Ethylbenzene	<0.30	ug/L	0.30	1.1	1			06/02/2017 07:14	AGK	EPA 8260C
Hexachlorobutadiene	<0.90	ug/L	0.90	2.9	1			06/02/2017 07:14	AGK	EPA 8260C
Isopropylbenzene	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
m & p-Xylene	<0.50	ug/L	0.50	1.8	1			06/02/2017 07:14	AGK	EPA 8260C
Methyl tert-butyl ether	<0.30	ug/L	0.30	1.1	1			06/02/2017 07:14	AGK	EPA 8260C
Methylene chloride	<0.50	ug/L	0.50	1.7	1			06/02/2017 07:14	AGK	EPA 8260C
n-Butylbenzene	<0.40	ug/L	0.40	1.2	1			06/02/2017 07:14	AGK	EPA 8260C
n-Propylbenzene	<0.50	ug/L	0.50	1.8	1			06/02/2017 07:14	AGK	EPA 8260C
Naphthalene	<0.70	ug/L	0.70	2.2	1			06/02/2017 07:14	AGK	EPA 8260C
o-Xylene	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
p-Isopropyltoluene	<0.50	ug/L	0.50	1.5	1			06/02/2017 07:14	AGK	EPA 8260C
sec-Butylbenzene	<0.40	ug/L	0.40	1.3	1			06/02/2017 07:14	AGK	EPA 8260C
Styrene	<0.50	ug/L	0.50	1.7	1			06/02/2017 07:14	AGK	EPA 8260C
tert-Butylbenzene	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
Tetrachloroethene	<0.50	ug/L	0.50	1.8	1			06/02/2017 07:14	AGK	EPA 8260C
Tetrahydrofuran	<3.0	ug/L	3.0	10	1			06/02/2017 07:14	AGK	EPA 8260C
Toluene	<0.30	ug/L	0.30	1.1	1			06/02/2017 07:14	AGK	EPA 8260C
trans-1,2-Dichloroethene	<0.60	ug/L	0.60	1.9	1			06/02/2017 07:14	AGK	EPA 8260C
trans-1,3-Dichloropropene	<0.40	ug/L	0.40	1.4	1			06/02/2017 07:14	AGK	EPA 8260C
Trichloroethene	**2.5**	ug/L	0.30	1.0	1			06/02/2017 07:14	AGK	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB Sample#: 872788 Sample Description: EXW-4-3 Sampled: 05/25/2017 0900

Analyte	Result	Units	LOD	LOQ	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Trichlorofluoromethane	<0.30	ug/L	0.30	1.1	1			06/02/2017 07:14	AGK	EPA 8260C
Vinyl chloride	<0.19	ug/L	0.19	0.64	1			06/02/2017 07:14	AGK	EPA 8260C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes: * Indicates a value in between the LOD (limit of detection) and the LOQ (limit of quantitation). All LOD/LOQs are adjusted to reflect dilution and also any differences in the sample weight / volume as compared to standard amounts.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

Submitted by: Eric T. Korthals
Project Manager
608-356-2760

Current CT Laboratories Certifications

Wisconsin (WDNR) Chemistry ID# 157066030
Wisconsin (DATCP) Bacteriology ID# 105-289
Louisiana NELAP (primary) ID# ACC20160002
Illinois NELAP Lab ID# 200073
Kansas NELAP Lab ID# E-10368
Virginia NELAP Lab ID# 460203
Maryland Lab ID# WI00061
ISO/IEC 17025-2005 A2LA Cert # 3806.01
DoD-ELAP A2LA 3806.01
GA EPD Stipulation ID ACC20160002
Pennsylvania NELAP Lab ID# 68-04201, # 008

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: MSA
Project Contact: Richard Lyster
Telephone: 608 355 8901
Project Name: Minocqua cleaners
Project #: 8267043
Location: Minocqua
Sampled By: RL

CT

1230 Lange Court, Baraboo, WI 53913
356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 127664
Company: MSA PROFESSIONALS
Project: MINOCQUA CLEANERS
Logged By: DRT PM ET

RA SDWA NPDES
e Other _____

Report To:
EMAIL: dlyster@msa-ps.com
Company: MSA
Address: 1230 South Blvd Baraboo WI 53913

Invoice To:*
EMAIL: Same
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions
Well Pumping 1 week

Matrix
GW - groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	ANALYSES REQUESTED: VOC	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test			
5-25-17	0900	GW	G		EXW-4-3	N	2			872788
					Hand Deliver on ice					

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	5-26-17 1015	[signature]	5/26/17 1090
Received by:	Date/Time	Received for Laboratory by:	Date/Time
		[signature]	5/26/17 1012

Lab Use Only
Ice Present (Yes) No
Temp 5.6 IR Gun #6
Cooler # Dred