

From: Dick Lyster <dlyster@msa-ps.com>
Sent: Thursday, December 16, 2021 12:00 PM
To: Sager, John E - DNR
Cc: Jeff Anderson
Subject: Minocqua Cleaners EXW 4 Assessment Report
Attachments: 8267050 Minocqua Cleaners EXW4 Dec 2021 Rpt.pdf

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John: Good morning, part of our Minocqua Cleaners contract was to perform an evaluation of the pumping well EXW-4 on Pine Street and assess for concerns for plume migration toward the Muni Well #4. The attached report is the evaluation summary and I wanted to send it to you prior to the end of the year. The assessment methods changed somewhat, in that the EXW-4 well was not shutdown (due to failing pump, etc) and this is explained in the report. We added quite a bit of review of the prior STS reports to supplement the monitoring measurements and review. This added quite a bit to the evaluation and I feel we have included a bigger picture near the Pine Street area of the site.

To give a quick summary: It appears the pumping does cause some plume migration from site areas north of the pumping well and from the direction of the source property (likely in preferential flow paths in the sand and gravel aquifer); but there is no increasing trend in the pumped water for over a decade and there are no greater than PAL chlorinated detections in the pumped water in recent years. Plus all monitoring wells in this south area are “no detect”. I think this shows a “low risk” situation for continued pumping of the well as a concern. So when you have an opportunity, take a review look and let us know any comments or questions.

The final item in our current contract is preparing a final status report of the monitoring through Round 4 (done in late Oct 2021). This report has the monitoring discussion included, but we’ll update to a final status report and provide that to you later. Let me know if anything else is needed at this time.....also Happy Holidays, hope you can take some time off and your not too busy! Dick Lyster, MSA



Richard Lyster, PG, CPG | Team Leader

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John Sager
Wisconsin Department of Natural Resources
1701 N. 4th Street
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Re: Assessment Near Pumping Well EXW-4
Minocqua Cleaners State-Lead Remediation Site (BRRTS 02-44-000052)
St. Germaine Street, Minocqua, Wisconsin

Dear John:

This letter report describes the hydrogeologic assessment of the conditions near extraction well EXW-4 at the Minocqua Cleaners site. The assessment was generally performed according to the scope of work in the MSA Professional Services, Inc. (MSA) proposal dated April 27, 2020 for work at the Minocqua Cleaners site and approved by the Wisconsin Department of Natural Resources (WDNR) on May 13, 2020.

Some variations to the proposed field program occurred in late 2020 and early 2021. This was related to the failure of the EXW-4 pump in late 2020 and early 2021, changes in personnel at Lakeland Sanitary District (LSD; the operator of the remediation system at the site) in late 2020, and discussions raising concerns with shutting down EXW-4 after the semi-annual sample event of October 2020. This resulted in the decision to allow the well to operate over Winter 2020-21 and not perform the well shutdown portion of the assessment. In Winter 2020-21, well EXW-4 had continued pump problems and the pump failed and was replaced in February 2021. Following the pump replacement, well EXW-4 has continuously operated in 2021. Although the events prevented the well shutdown observations, a review of prior reports and additional well measurements were performed in 2021. This additional information and a review of the groundwater sample results through October 2021 were used to perform the EXW-4 assessment.

Purpose of the Well EXW-4 Assessment

The objective of the assessment is to provide information for possible decisions regarding the future operation of well EXW-4 and continued groundwater pumping at the site. Due to the continuous pumping of extraction well EXW-4 and the observed contraction of the chlorinated volatile organic compound (CVOC) plume, there are concerns that the pumping may enhance migration of the plume toward the southeast and in the direction of Municipal Well #4.

The current assessment did not to perform a detailed modeling of site pumping conditions but reviewed the historical and current site monitoring data to assess the effects of pumping at EXW-4.

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The assessment included installing two additional monitoring wells (i.e., wells MW-12A and MW-12B) on Pine Street and west of well EXW-4. These wells were used as water level observation wells to assess the pumping wells zone of influence (ZOI) and to collect groundwater samples to further define the plume. A field program was performed to measure water level elevations at the monitoring well nests near the pumping well EXW-4 and was used to assess the effects of the pumping well EXW-4 in the Pine Street area of the site.

SITE BACKGROUND INFORMATION

The attached Figure 2 - Site Layout Map shows the source property, remediation wells and site features. Well EXW-4 is in the southern area of the site on Pine Street and approximately 280 ft southeast and hydraulically downgradient of the source property on St. Germain Street. In recent years, well EXW-4 has continuously pumped relatively low-level contaminated groundwater with a pump rate of approximately 60 gallons per minute (gpm). Well EXW-4 was originally installed in 1987 and replaced in May 2017 after the original high-capacity well began pumping sand and was determined to be damaged by LSD. As of the date of this report, both wells EXW-4 and EXW-6 continue to operate and pump water to the collection manhole and cascading weir, with water discharged to the outfall at the lake.

Site History

The site is a former dry cleaner operation that reportedly had surface discharge of dry cleaner solvents containing tetrachloroethylene (or PCE). Chlorinated volatile organic compounds (CVOCs) are the primary contaminant of concern at the site. The original groundwater remediation system at the site was constructed in 1987 as a plume containment and hydraulic barrier system with extraction wells EXW-1 through EXW-4, with the purpose of protecting the two downgradient water supply wells (i.e., Well #3 and #4). According to the Construction Documentation Report (STS 1987), Municipal Well #3 was originally impacted and pumped for a short period with the extraction wells. Well #3 then cleaned up and was put back on-line as a water supply well.

Municipal Well #3 was 95 feet deep and was screened from 47 to 87 feet in the sand and gravel aquifer. Well #3 was permanently abandoned in January 2020 by LSD and is no longer a risk for CVOC contamination. Municipal Well #4 is approximately 520 ft southeast of the source property and remains as a potential receptor of contamination. In 2019, Municipal Well #4 was pumped at a rate of approximately 500 gpm, with a capacity to pump up to 700 gpm. In 2019, it pumped 57,360,000 gallons, which corresponds to pumping approximately 5.2 hours per day at a rate of 500 gpm. Well construction records indicate Municipal Well #4 is 90 feet deep and screened from 69 to 89 feet in the sand and gravel aquifer.

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Current Site Remediation Program

This report follows the *Status Report* dated February 26, 2020, which summarized the semi-annual groundwater monitoring results from October 2018 to October 2019. The attached Figure 3 – Well Location Map shows the location of the water supply, monitoring and remediation wells at the site.

The current site remediation program has semi-annual groundwater monitoring and discharge samples collected, with the sample events usually occurring in April and October. Two remediation wells are in continuous operation with extraction well EXW- 4 pumping at a rate of approximately 60 to 65 gpm. Extraction well EXW-6 is located on the source property and was installed in November 2006 and pumps at a rate of approximately 15 gpm. Both extraction wells have generally been in constant operation, although well EXW-4 has experienced recent pump problems and the pump was replaced and restarted in February 2021. Prior to that, the original well EXW-4 failed likely due to screen problems and was replaced with a new EXW-4 in June 2017.

Site Geology

The subsurface at the site is composed of primarily sand and gravel outwash deposits and may have a thickness of up to 240 ft in the area, with an average thickness of approximately 100 ft over Precambrian bedrock (STS March 1988, referencing Oakes and Cotter 1975). Soil borings at the site encountered primarily fine sand (SM to SP) and fine to coarse sand (SP) with a trace gravel. Bedrock underlying the area are igneous and metamorphic rocks.

The glacial outwash deposits are the source of groundwater in the region and the aquifer at the site appears to be an unconfined, sand and gravel, glacial outwash aquifer. The municipal wells are installed in sand and gravel, unconfined aquifer conditions, to depths approximately 95 ft below ground surface (bgs). There were no significant confining layers or thick clay layers observed in the soil borings performed at the site.

According to prior reports (STS March 1988), groundwater flows from east to west (i.e. from Lake Minocqua to the municipal water supply wells) and vertical hydraulic gradients are minimal under static conditions. The report also indicates that the addition of the high-capacity barrier and extraction wells (i.e., the original EXW-1 through 4 in 1987) enhanced flow velocity and vertical groundwater gradients in portions of the site. These high-capacity wells are no longer present at the site.

The January 1986 STS report (*Minocqua Water Supply Contamination Assessment*) describes a pump test on November 13, 1985 involving Well #3. Prior to the test, the lake level was surveyed with an elevation of 1584.72 MSL and the static water level in Well #3 was 1582.2 MSL indicating a difference of 2.5 ft and a horizontal gradient toward Well #3 of 0.005 and some effects of lake level and seasonal fluctuations would be expected. The pumping test results while Well #3 was pumped at 605 gpm indicated radial flow to the well with a steep cone of depression near the well and shallow gradient farther from the well with all monitoring affected by the pumping. The pump test indicated a cone of depression indicative of an aquifer with a high permeability and transmissivity

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and thus a capacity for fast recharge (STS 1986). A second test at Well # 3 used 100 gpm as the pump test to simulate extraction wells. This test showed a radius of influence on the order of 200 to 250 ft, or less, with a shallow gradient. This pump rate of 100 gpm is closer to the pump rate at well EXW-4 which is approximately 60 gpm.

ASSESSMENT NEAR EXW-4 AND PINE STREET

In the area near well EXW-4, the monitoring wells have been installed as well nests that monitor up to three zones in the unconsolidated sand and gravel. Several of the well nests have a water table well (intersecting the water table) at depths of approximately 23 ft below ground surface (bgs), a mid-depth piezometer with an approximate depth of 60 ft bgs, and a deeper piezometer with a screened depth of approximately 85 to 90 ft bgs. Water level measurements at these well nests have been used to measure vertical gradients in the sand and gravel aquifer near extraction well EXW-4 while it is pumping and then used to estimate the well EXW-4 zone of influence.

Additional Monitoring Wells and T.O.C Survey Near Extraction Well EXW-4

Two additional monitoring wells were installed in July 2020 adjacent to existing well B-12 on Pine Street (refer to Figure 3- Well Location Map). The well nest was installed to help assess contaminant flow toward Pine Street and assess the plume's southern boundary. The new wells were installed as a well nest with well B-12 with a water table observation well (MW-12B) and a deeper piezometer (wells MW-12A). Well MW-12B is 27 ft deep and well MW-12A is approx. 88 ft deep.

Well B-12 was installed in 1987 and is located approximately 90 ft west of pumping well EXW-4. The original well B-12 was installed as a 4-inch well capable of being pumped as a backup well in case the original high-capacity wells would have failed or not provided enough hydraulic control. Well B-12 is 45 ft deep and has a screen that is 25-ft long (from 15 ft to 40 ft) which intersects the water table of the sand and gravel aquifer.

During the initial field measurement visits, it was noted that top of casing T.O.C. information from the older wells appeared suspect. MSA performed a new top of casing (T.O.C.) elevation survey on October 26 and 27, 2020 for all the wells located near EXW-4 and used for the assessment.

Water Level Measurements Near Extraction Well EXW-4

Water level measurements from observation wells, pump rate information from EXW-4, and the assessment of groundwater elevations were used for the assessment near Pine Street. The primary measurements were obtained during 10 measurement events beginning in May 2020 to November 2021. Previous water level measurements were also reviewed to confirm consistency and variations in the vertical gradients at the well nests. The water level data and vertical gradient calculations are presented in the attached Tables 1 and 2.

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The observed groundwater flow direction at the site has been consistent during recent years and is east-southeast across the site. A water table flow map from measurements obtained on October 25, 2021 is shown on Figure 4 and shows Municipal Well #4 is downgradient of the source property and contaminant plume.

Vertical Gradients

Based on previous report information, vertical hydraulic gradients under static conditions are minimal in the site area (STS 1988). Generally, they are small and upward during low water and small and downward during high water (spring). This condition is observed in well nests at the site that are beyond the areas influenced by the two pumping wells (i.e. B10/B11). Downward vertical gradients at well nests near EXW-4 are greater and indicate downward flow, as they are affected by groundwater removal from the pumping well.

Vertical hydraulic gradients were calculated from the water level measurements at the well nests and used to estimate the zone of influence (ZOI) of the pumping well EXW-4. The vertical gradients measured at the observation well nests are affected by the distance from pumping wells, the lake stage, and seasonal fluctuations of high and low water. Vertical gradients measured at wells near pumping well EXW-4 during Fall 2021 are shown on Table 1.

The following is observed regarding the vertical hydraulic gradients near pumping well EXW-4.

- Vertical groundwater gradients are generally small under static conditions for the unconfined sand and gravel aquifer. Very small vertical gradients are observed at the well nests that seem unaffected by the EXW-4 pumping well, such as well nests B-3 / B-3A, B-10 / B-11, and B-5 / B-9. These well nests are located 150 to 192 ft from pumping well EXW-4.
- Larger downward vertical gradients are observed at well nests B-2 located 75 ft from pumping well EXW-4, and B-8 located 120 ft from pumping well EXW-4. Smaller downward vertical gradients are observed at well nests B-1 located 140 ft from pumping well EXW-4, and B-12 located 80 ft from pumping well EXW-4. The general downward vertical gradients observed at these well nests indicate the water levels in the wells are affected by the pumping well EXW-4 at a pump rate of approximately 61 gpm during Fall 2021.
- An interpretation of the pumping well zone of influence (ZOI) is shown in Figure 6 with well EXW-4 pumping at 61 gpm during Fall 2021. The interpreted ZOI extends more upgradient from EXW-4, as compared to the downgradient area toward the B-5/ B-9 well nest, which often had small upward vertical gradients during the measurement events.
- A cone of depression with a shallow gradient of approximately 150 ft from EXW-4 at 61.7 gpm is generally consistent with prior pump tests performed at the site. According to the STS 1986 report, a pump test indicated a radius of influence on the order of 200 to 250 ft, or less, with a shallow gradient when Well # 3 was pumped at 100 gpm.

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- It is noted that EXW-4 pumping rates have been variable during the assessment and were measured at:
 - 54 gpm measured at the flowmeter on July 14 and July 15, 2020,
 - 31 gpm on September 21, 2020,
 - 24 gpm on December 4, 2020,
 - 59 gpm after the pump was replaced in February 2021, and
 - 59.4 to 61.7 gpm from April to November 2021

CVOC Plume Near Extraction Well EXW-4

The semi-annual monitoring results were also used to assess the plume characteristics near Pine Street and pumping well EXW-4. Monitoring results are summarized in Table 3 for site monitoring well sampling through October 25, 2021.

A map of the CVOC plume at the site based on October 25 and 26, 2021 monitoring results is shown on Figure 5. The following is observed near well EXW-4 and Pine Street.

- All monitoring wells near Pine Street are non-detect for CVOC except for pumping well EXW-4. The pumping well had detections of 1.6 ug/L trichloroethene (NR 140 PAL exceedance) and cis-1,2 DCE at 1.8 ug/L in October 2021. Other monitoring wells (B-5 and B-9) southeast of EXW-4 were "non-detect" indicating the southern extent of the plume does not extend south of Pine Street except for the pumped water from EXW-4.
- The sand and gravel aquifer is not homogeneous and the pumping well will have preferential flow layers within the sand and gravel aquifer. This may explain the low level CVOC detections that are observed in the pumped water from EXW-4, while the monitoring wells on Pine Street have recently been "non-detect" for CVOCs.
- Since installation in July 2020, new wells MW-12A and MW-12B have been sampled 4 times for VOCs from August 2020 to October 2021. The MW-12 well nest has been "non-detect" for CVOCs suggesting the plume is not present west of this well nest on Pine Street. This is confirmed with results from wells B-10 and B-11 which are also "non-detect".
- The plume evaluation included the B-2 well nest, and wells B-5 and B-9 which were not sampled since 2004 and 2010. The sampling started with the semi-annual sample event of May 2020 and all of these wells have been "non-detect" for CVOCs in the four sample rounds ending October 2021. This provides more current CVOC plume information near Pine Street and the area north of Municipal Well #4 and suggests the plume does not extend south of Pine Street in the eastern area of the site.

ASSESSMENT SUMMARY

The following summarizes the assessment near well EXW-4 and the area near Pine Street.

Conditions Near Pumping Well EXW-4

- Downward vertical gradients near pumping well EXW-4 indicate the wells zone of influence can be estimated. The zone of influence is shown on Figure 6 and extends approximately 110 to 150 ft from the pumping well with a greater influence in a northern direction from well EXW-4.
- The monitoring results show the pumped water from EXW-4 has lower-level contamination, including Chapter NR 140 Preventive Action Limit (PAL) exceedances for TCE, and has not had an Enforcement Standard (ES) exceedance for CVOCs since 2006.
- The assessment shows the EXW-4 zone of influence does intersect the CVOC plume. As the sand and gravel aquifer is not homogeneous, the contaminated water may originate from preferred flow paths with greater hydraulic conductivity in the aquifer.
- Pumping well EXW-4 likely influences the plume movement toward the well. The well is in the downgradient direction of groundwater flow at the site, suggesting the plume will migrate in the direction of the well EXW-4 without pumping.

Plume Assessment near EXW-4 and Municipal Well #4

- Groundwater sample results and groundwater flow direction show the position of monitoring wells B-5 and B-9 are furthest downgradient wells and have been “non detect” for CVOCs during 2020 and 2021 semi-annual monitoring. These two wells are furthest downgradient wells and monitor the plume prior to the location of Well #4.
- The new wells MW-12A and MW-12B have been sampled 4 times for VOCs from August 9, 2020 to October 25, 2021. The MW-12 well nest has been “non- detect” for CVOCs suggesting the plume is not present in this area of Pine Street.
- The monitoring wells located on Pine Street (i.e., B-10 and B-11, the B-12 well nest, and the B-2 well nest) have been “non-detect” for CVOCs since 2017. The additional wells MW-12A and MW-12 B installed in July 2020 have been “non-detect” in 4 sample rounds since

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installation. This suggests the plume does not extend south of Pine Street, with the exception of the pumped water from EXW-4.

Remediation System

- Construction Documentation reports show the remediation system was originally installed to operate high-capacity extraction wells EXW-1 to EXW-5 that were installed about 1989. The purpose of the remediation system was to pump large amounts of groundwater to create a hydraulic barrier between the contaminant plume and Municipal Wells #3 and #4. The wells operated at a high pumping capacity of over 200 gpm at each well with pumped water piped to the circulation manhole and cascading wier prior to discharge of treated water at the lake.
- The current remediation system consists of wells EXW-4 and EXW-6 with a total combined pumping of approximately 75 gpm from both wells (i.e. 60 gpm at EXW-4 and 15 gpm at EXW-6) with partial CVOC removal at the cascading wier prior to discharge at the lake.

CONCLUSIONS AND RECOMMENDATIONS

The results show pumping EXW-4 may cause some plume migration to the well from the upgradient area of the site. The pumped water has a Chapter NR 140 Preventive Action Limit (PAL) exceedance for TCE, but it has not had an Enforcement Standard (ES) exceedance for CVOCs since sampling in 2006. Therefore, as increasing trends have not been observed, it does not appear that pumping EXW-4 at the current pump rate causes a significant amount of plume migration to this area of the site. In addition, other monitoring wells near EXW-4 have been "non detect" in recent monitoring, suggesting the plume has not migrated south of Pine Street.

This suggests conditions exist to allow a possible shut-down of the extraction well EXW-4, although operating both wells EXW-4 and EXW-6 may have some benefits. The benefits include mixing of water from EXW-6 prior to discharge to the lake. Also, the two pumping wells do remove contaminated groundwater from the subsurface which is subsequently treated at the manhole and cascading weir. It is not known if pumping only one well will provide acceptable levels of remediation for the contaminated water prior to discharge to the lake.

If the pumping of water from EXW-4 and EXW-6 is discontinued, we recommend continued site groundwater monitoring for CVOCs on a frequency that will confirm the wells on Pine Street remain non-detect for CVOCs. This may require an extended period of monitoring to confirm the plume does not migrate and result in increased CVOCs in the area near Pine Street. If there are CVOC detections in monitoring wells near Pine Street during the groundwater monitoring, the option of activating well EXW-4 should be evaluated at that time.

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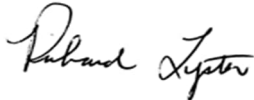
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CLOSING REMARKS

We look forward to discussing the assessment and any questions you may have concerning the results. Please contact me at your convenience if there are any questions and we look forward to successfully completing the project for the Department.

Sincerely,

MSA Professional Services, Inc.



Richard Lyster, P.G.
Project Manager

RL:dp
Enc.

cc:

Attachments:	Table 1	Observed Vertical Gradients at Well Nests
	Table 2	Groundwater Elevations in Wells Near EXW-4
	Table 3	Groundwater Sample Analytical Results
	Figure 1	none
	Figure 2	Site Layout Map
	Figure 3	Well Location Map
	Figure 4	Water Table Flow Direction, October 25 and 26, 2021
	Figure 5	CVOC Concentrations, October 25 and 26, 2021
	Figure 6	Interpreted Zone of Influence – Pumping Well EXW-4

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TABLES

TABLE 1
OBSERVED VERTICAL GRADIENTS AT WELL NESTS
 (With EXW-4 Pumping at Approx. 61 GPM)

WELL NUMBERS / WELL NEST	Reference Elevation of Head Measurement (1)	Groundwater Elevation (in ft., MSL)	Vertical Hydraulic Gradient (ft./ft.) (2)	Observation
B-12 (41')	1576.60	1582.62	-.00016	Generally very small downward gradients observed in the well nest 80 ft west of EXW-4 suggesting less zone of influence west of the pumping well
MW-12A (87')	1520.31	1582.59		
MW-12B (27')	1582.60	1582.60		
80 ft W of EXW-4				
B-1B (27')	1582.71	1582.71	-.00017	Generally very small vertical gradients observed in the well nest suggesting less zone of influence 140 ft NE of the pumping well
B-1A (60')	1551.6	1582.72		
B-1 (90')	1522.58	1582.70		
140 ft NE of EXW-4				
B-8 (30.5')	1582.89	1582.89	-.00304	Consistent downward vertical gradients at well nest during pumping of EXW-4 indicating downward flow NE of EXW-4
B-8A (62.5')	1543.37	1582.77		
120 ft NE of EXW-4				
B-2B (23')	1582.55	1582.55	-.00377	Consistent downward vertical gradients at well nest during pumping of EXW-4 indicating downward flow east of EXW-4
B-2A (60')	1545.42	1582.41		
B-2B (90')	1515.72	1582.33		
75 ft E of EXW-4			-.00329	
B-3A (32')	1583.21	1583.21	+.00135	Well nest appears to be outside of zone of influence of EXW-4 and shows small upward gradient in Fall 2021
B-3 (61.5')	1546.22	1583.26		
200 ft NW of EXW-4				

WELL NUMBERS / WELL NEST	Reference Elevation of Head Measurement (1)	Groundwater Elevation (in ft., MSL)	Vertical Hydraulic Gradient (ft./ft.) (2)	Observation
B-11 (27')	1582.60	1582.60		Well nest appears to be outside of zone of influence of EXW-4 and shows small upward gradient in Fall 2021
B-10 (52') 160 ft W of EXW-4	1552.00	1582.61	+0.0033	
B-5 (26')	1582.44	1582.44		Generally upward vertical gradients are observed at the well nest during pumping of EXW-4 with possible effects of Muni #4 if pumping during some events.
B-9 (61.7') 150 ft SE of EXW-4	1543.50	1582.58	+0.00365	

Notes:

- 1) The reference elevation of head measurement is the point half-way between the top and bottom of the slotted portion of the screen for piezometers, or the water table elevation for water table wells.
- 2) Vertical Gradient = $\frac{(\text{groundwater elevation in deep well}) - (\text{groundwater elevation of shallow well})}{\text{Absolute value of difference between reference elevation of head measurement}}$
- 3) Water levels in Table 1 were measured in October and November 2021 with EXW-4 pumping.

Table 2 - Groundwater Elevations Near EXW-4 Following Installation of Well EXW-4 in May 2017 - Well Nests

Minocqua Cleaners, Minocqua, WI

Well Number Well Depth Screen Length Ground Surface Top of Casing Top of Screen DATE	Well Nest # 1						Well Nest # 2				Well Nest #3					
	B-1 90 ft 5		B-1A 60 ft 5		B-1B 27 ft 15		B-2 90 ft 5		B-2A 60 ft 5		B-2B 23 ft 15		B-3 61.5 ft 5		B-3A 32 ft 15	
	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
25-May-16	23.63	1582.85	23.81	1582.85	24.09	1582.83	21.78	1582.22	21.28	1582.24	20.92	1582.76	21.60	1583.56	21.89	1583.53
16-Nov-16	23.44	1583.04	23.61	1583.05	23.87	1583.05	21.25	1582.75	20.71	1582.81	20.77	1582.91	21.58	1583.58	21.88	1583.54
27-Apr-17	23.03	1583.45	23.24	1583.42	23.51	1583.41	20.56	1583.44	20.07	1583.45	20.27	1583.41	21.29	1583.87	21.51	1583.91
30-Oct-17	23.48	1583.00	23.65	1583.01	23.91	1583.01	21.48	1582.52	20.90	1582.62	20.83	1582.85	21.61	1583.55	21.93	1583.49
26-Apr-18	24.38	1582.10	24.55	1582.11	24.86	1582.06	22.70	1581.30	22.17	1581.35	21.74	1581.94	22.47	1582.69	22.74	1582.68
29-Oct-18	23.49	1582.99	23.63	1583.03	23.90	1583.02	21.51	1582.49	20.93	1582.59	20.88	1582.80	21.63	1583.53	21.94	1583.48
08-Apr-19	24.08	1582.40	24.23	1582.43	24.50	1582.42	22.43	1581.57	21.89	1581.63	21.44	1582.24	22.09	1583.07	22.37	1583.05
28-Oct-19	23.39	1583.09	23.53	1583.13	23.88	1583.04	21.44	1582.56	20.88	1582.64	20.87	1582.81	21.54	1583.62	21.85	1583.57
26-May-20	23.66	1582.82	23.66	1583.00	23.91	1583.01	21.34	1582.66	20.82	1582.70	20.86	1582.82	21.56	1583.60	21.86	1583.56
10-Jun-20	23.42	1583.06	23.62	1583.04	23.89	1583.03	21.27	1582.73	20.74	1582.78	20.82	1582.86	-	#VALUE!	-	#VALUE!
14-Jul-20	23.80	1582.68	23.83	1582.83	24.08	1582.84	21.95	1582.05	21.46	1582.06	21.05	1582.63	-	#VALUE!	-	#VALUE!
15-Jul-20	23.54	1582.94	23.73	1582.93	24.02	1582.90	21.36	1582.64	20.83	1582.69	20.92	1582.76	-	#VALUE!	-	#VALUE!
21-Sep-20	23.56	1582.92	23.75	1582.91	24.03	1582.89	21.33	1582.67	20.80	1582.72	20.92	1582.76	-	-	-	-
26-Oct-20	23.41	1583.07	23.54	1583.12	23.87	1583.05	21.66	1582.34	20.53	1582.99	20.61	1583.07	22.25	1582.91	21.86	1583.56
04-Dec-20	23.90	1582.58	23.91	1582.75	24.15	1582.77	21.87	1582.13	21.39	1582.13	20.99	1582.69	-	-	-	-
07-Apr-21	24.45	1582.03	24.45	1582.21	24.70	1582.22	22.65	1581.35	22.14	1581.38	21.65	1582.03	-	#VALUE!	-	#VALUE!
15-Apr-21	23.89	1582.59	24.06	1582.60	24.34	1582.58	22.21	1581.79	21.69	1581.83	21.23	1582.45	22.02	1583.14	22.26	1583.16
26-Oct-21	23.92	1582.56	24.07	1582.59	24.35	1582.57	21.79	1582.21	21.33	1582.19	20.91	1582.77	21.90	1583.26	22.21	1583.21
16-Nov-21	23.78	1582.70	23.94	1582.72	24.21	1582.71	21.67	1582.33	21.11	1582.41	21.13	1582.55	-	#VALUE!	-	#VALUE!

Well Number Well Depth Screen Length Ground Surface Top of Casing Top of Screen DATE	Nest w/ B-9		Well Nest #4			Nest w/ B-5		Well Nest #5			Depth	Elevation	Depth	Elevation
	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation				
25-May-16	16.62	1582.40	19.36	1583.50	20.41	1582.96	16.86	1581.61	18.37	1582.88	18.59	1582.85		
16-Nov-16	16.24	1582.78	19.38	1583.48	20.30	1583.07	15.61	1582.86	18.18	1583.07	18.39	1583.05		
27-Apr-17	15.80	1583.22	18.78	1584.08	19.84	1583.53	16.05	1582.42	18.04	1583.21	18.04	1583.40		
30-Oct-17	16.19	1582.83	19.53	1583.33	20.34	1583.03	15.57	1582.90	18.5	1582.75	18.64	1582.80		
26-Apr-18	17.41	1581.61	19.73	1583.13	21.21	1582.16	17.45	1581.02	19.14	1582.11	19.32	1582.12		
29-Oct-18	16.31	1582.71	19.38	1583.48	20.31	1583.06	15.67	1582.80	18.25	1583.00	18.46	1582.98		
08-Apr-19	17.09	1581.93	19.27	1583.59	20.89	1582.48	16.45	1582.02	19.07	1582.18	19.08	1582.36		
28-Oct-19	16.42	1582.60	19.18	1583.68	20.34	1583.03	15.73	1582.74	18.17	1583.08	18.37	1583.07		
10-Jun-20	16.39	1582.63	19.35	1583.51	20.29	1583.08	15.65	1582.82	18.25	1583.00	18.46	1582.98		
14-Jul-20	17.06	1581.96	19.58	1583.28	20.48	1582.89	17.06	1581.41	18.32	1582.93	18.62	1582.82		
15-Jul-20	16.44	1582.58	19.58	1583.28	20.39	1582.98	15.71	1582.76	18.30	1582.95	18.53	1582.91		
21-Sep-20	16.40	1582.62	19.79	1583.07	20.41	1582.96	15.71	1582.76	18.30	1582.95	18.53	1582.91		
26-Oct-20	-	1599.02		1602.86		1603.37		1598.47		1601.25		1601.44		
04-Dec-20	-	#VALUE!		1602.86		1603.37	-	#VALUE!		1601.25		1601.44		
07-Apr-21	-	#VALUE!	20.28	1582.58	21.14	1582.23	-	#VALUE!	19.02	1582.23	19.24	1582.20		
15-Apr-21	16.80	1582.22	19.93	1582.93	20.73	1582.64	16.11	1582.36	18.64	1582.61	18.84	1582.60		
26-Oct-21	16.58	1582.44	19.92	1582.94	20.74	1582.63	15.89	1582.58	18.41	1582.84	18.62	1582.82		
16-Nov-21	15.91	1583.11	19.97	1582.89	20.60	1582.77	16.57	1581.90	18.64	1582.61	18.84	1582.60		

Table 2 - Groundwater Elevations Near EXW-4 Following Installation of Well EXW-4 in May 2017 - Well Nests

Well Number	B-13		B-13A		B-13B				MW-18		MW-18A	
	Depth	Elevation	Depth	Elevation	Depth	Elevation			Depth	Elevation	Depth	Elevation
Well Depth	35 ft		62 ft		92 ft				17 ft		61 ft	
Screen Length	25		5		5				10		5	
Ground Surface	1594.58		1593.91		1594.1				1590.9		1589.48	
Top of Casing	1596.7		1596.33		1596.16				1591.42		1591.6	
Top of Screen	1585.1		1538.9		1509.1				1585.9		1535.7	
DATE												
25-May-16	12.41	1584.29	13.14	1583.19	12.93	1583.23			8.04	1583.38	8.28	1583.32
16-Nov-16	12.48	1584.22	13.15	1583.18	12.92	1583.24			8.09	1583.33	8.34	1583.26
27-Apr-17	12.01	1584.69	12.82	1583.51	12.63	1583.53			7.80	1583.62	8.08	1583.52
30-Oct-17	12.48	1584.22	13.19	1583.14	12.95	1583.21			7.99	1583.43	8.31	1583.29
26-Apr-18	13.16	1583.54	14.01	1582.32	13.78	1582.38			8.49	1582.93	9.07	1582.53
29-Oct-18	12.47	1584.23	13.21	1583.12	12.96	1583.20			8.06	1583.36	8.38	1583.22
08-Apr-19	12.80	1583.90	13.67	1582.66	13.45	1582.71			8.43	1582.99	8.84	1582.76
28-Oct-19	12.39	1584.31	13.11	1583.22	12.91	1583.25			7.98	1583.44	8.29	1583.31
15-Apr-21	12.74	1583.96	13.51	1582.82	13.27	1582.89			8.24	1583.18	8.63	1582.97
26-Oct-21	12.71	1583.99	13.48	1582.85	13.30	1582.86			8.16	1583.26	8.39	1583.21

Well Number											Well Nest #6					
	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation				
Well Depth											B-12	MW-12B	MW - 12A			
Screen Length											41 ft	27 ft	87 ft			
Ground Surface											25	10	5			
Top of Casing											1602.93	1602.44	1602.61			
Top of Screen											1604.03	1604.74	1604.81			
DATE											1589.1	1587.74	1520.31			
21-Sep-20											21.16	1582.87	21.90	1582.84	21.93	1582.88
26-Oct-20											21.71	1582.32	21.77	1582.97	22.13	1582.68
04-Dec-20											21.27	1582.76	21.97	1582.77	22.32	1582.49
07-Apr-21											21.91	1582.12	22.64	1582.10	22.70	1582.11
15-Apr-21											21.54	1582.49	22.27	1582.47	22.36	1582.45
26-Oct-21											21.29	1582.74	22.11	1582.63	22.01	1582.80
16-Nov-21											21.41	1582.62	22.14	1582.60	22.22	1582.59

Notes:

- Datum for Measurements is Mean Sea Level (MSL)
- Elevations for TOC of wells B-1, B-1A, B-1B, B-2, B-2A, B-3, B-3A, B-8, B-8A, B-10, B-12, MW15, MW17 were resurveyed on May 5, 2005. The bolt on the fire hydrant was the benchmark of 1603.56, as shown on basemap.
- Elevations for TOC and ground surface of wells B-5, B-9 were resurveyed on July 30, 2008.
- Elevations for TOC for well nest wells near EXW-4 (B-12, B-2, B-5 /B-9, B-1, B-8, B10/B11) were re-surveyed by MSA on Oct 26, 2020 using B-8 T.O.C. as benchmark at elev. 1602.86.
- This Table 2 shows Orange shading as indicating downward vertical gradient between well screen zones and yellow indicates upward vertical gradient between well screen zones at the respective well nest.

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1606.48 ft MSL											
B-1 (90')	12/01/99	ND	ND	ND	ND	ND					
	11/01/03	ND	ND	ND	ND	ND					
	12/06/04	<0.5	<0.4	<0.5	<0.6	<0.3	1576.77	8.68	1.29	126	309.9
	03/22/05	<0.60	<0.60	<0.4	<0.15	<0.12	1580.91	8.47	1.43	145	336.5
	08/31/05	<0.60	<0.60	<0.4	<0.15	<0.12	1580.85	7.21	1.06	147	399.2
	02/14/06	<0.60	<0.60	<0.4	<0.15	<0.12	1580.80	7.60	1.40	149	398.9
	05/22/06	<0.4	<0.4	<0.29	0.19	<0.15	1581.08	7.83	1.89	151	306.4
	08/08/06	<0.4	<0.4	<0.29	<0.15	<0.15	1574.87	8.27	1.27	173	374
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1580.88	7.37	1.26		287
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1581.47	8.14	1.28	155	370
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.51	7.67	1.17		393
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1575.19	6.84	0.42	160	432
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.98	7.54	1.41	182	386
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1580.83	7.62	1.13		411
	11/20/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.58	8.05	1.49	190	395
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.13	7.12	1.64	245	398
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.34	6.79	1.74	276	398
	08/05/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.62	7.26	1.04	172	407
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.27	7.48	1.85	13.9	404
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1581.38	7.94	1.48	129	385
	10/25/10	<0.5	<0.5	<0.5	<0.2	<0.2	1582.82	7.63	1.31	53	385
	04/26/11	<0.5	<0.5	<0.5	<0.2	<0.2	1582.21	8.14	1.97	76	411
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.42	7.33	2.02	181	375
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.61	6.81	2.01	169	334
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.40	7.35	1.93	161	356
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1581.92	6.96	2.38		337
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.16	7.36	1.41		317
04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.50	7.18	2.39		368	
10/20/15	<0.41	<0.35	<0.37	<0.16	<0.20	1582.71	7.83	1.64	215	386	
05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.85	7.89	1.78	282	399	
11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.04	7.72	1.93	223	407	
04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.45	8.36	2.15	230	406	
10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.00	8.06	1.34	313	404	
04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.10	7.31	2.19	237	408	
10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1582.99	7.15	2.23	428	410	
04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.40	7.07	2.73	417	408	
10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.09	7.03	1.74	344	409	
05/26/20	not sampled										
10/26/20	not sampled					1583.07					
04/15/21	not sampled					1582.59					
10/25/21	not sampled					1582.70					
Top of Casing Elevation = 1606.66 ft MSL											
B-1A (60')	12/06/04	<0.4	<0.4	<0.5	<0.6	<0.3	1580.27	8.44	1.08	173	463.4
	03/22/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.05	8.23	1.88	138	399.7
	08/31/05	<0.60	<0.60	<0.4	<0.15	<0.12	1580.98	6.70	2.26	274	348
	02/14/06	<0.60	<0.60	<0.4	<0.15	<0.12	1580.96	7.30	1.70	157	348.2
	05/22/06	<0.4	<0.4	<0.29	<0.15	<0.15	1581.25	7.41	1.31	154	360
	08/08/06	<0.4	<0.4	0.56	0.44	<0.15	1578.71	7.58	0.91	522	378
	11/29/06	<0.4	<0.4	<0.29	>0.15	<0.15	1580.45	7.59	1.19		328
	02/26/07	<0.4	<0.4	<0.29	>0.15	<0.15	1581.19	7.05	1.31	436	455
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.65	7.56	1.27		487
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1579.30	6.73	1.97	448	559
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.00	7.01	1.33	349	501
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1580.93	7.37	1.86	335	476
	11/20/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.59	8.02	1.92	234	452
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.13	7.09	1.56	311	388
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.50	6.91	1.39	363	468
	08/05/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.72	6.64	1.86	410	471
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.47	7.06	1.81	301	530
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1581.59	7.79	1.68	219	519
	05/11/10	<0.25	<0.25	<0.3	<0.21	<0.22	1581.47	7.85	1.31	401	502
	10/25/10	<0.5	<0.5	<0.5	<0.2	<0.2	1582.84	7.04	1.91	261	502
	04/26/11	<0.5	<0.5	<0.5	<0.2	<0.2	1582.19	8.16	1.92	240	426
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.43	7.28	1.82	188	526
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.64	6.87	2.11	289	483
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.57	7.23	1.89	222	530
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1581.84	6.84	1.97		506
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.20	7.12	1.44		447
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.50	7.01	2.08		419
10/20/15	<0.41	<0.35	<0.37	<0.16	<0.20	1582.92	7.40	1.57	343	509	
05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.85	7.55	0.78	400	520	
11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.05	7.77	1.80	294	589	
04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.42	8.20	2.02	281	608	
10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.01	7.71	1.36	291	546	
04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.11	7.25	2.56	243	536	
10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1583.03	7.15	2.17	438	549	
04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.43	7.23	2.04	382	482	
10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.13	7.10	1.65	306	604	
05/26/20	not sampled										
10/26/20	not sampled					1583.07					
04/15/21	not sampled					1582.59					
10/25/21	not sampled					1582.72					

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1606.92 ft MSL											
B-1B (27)	12/06/04	<0.5	<0.4	<0.5	<0.6	<0.3	1580.52	8.52	1.84	171	406.5
	03/22/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.06	8.83	1.41	152	436.8
	08/31/05	<0.60	<0.60	<0.4	<0.15	<0.12	1580.98	6.69	1.40	277	374.4
	02/14/06	<0.60	<0.60	<0.4	<0.15	<0.12	1580.94	7.29	1.32	161	392
	05/22/06	<0.4	<0.4	<0.29	<0.15	<0.15	1581.28	7.41	1.67	154	350.4
	08/08/06	<0.4	<0.4	<0.29	<0.15	<0.15	1580.03	8.15	1.42	343	415
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1580.24	7.19	1.89		332
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1581.03	7.00	1.69	397	486
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.63	7.45	1.83		462
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1579.66	6.79	1.72	461	557
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.98	6.98	1.87	362	545
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1580.90	7.15	2.40	330	468
	11/20/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.58	8.71	2.22	396	413
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.10	7.39	2.57	335	377
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.52	6.53	1.56	329	458
	08/05/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.71	6.72	2.51	448	479
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.49	6.93	1.46	325	538
	05/11/10	<0.25	<0.25	<0.3	<0.21	<0.22	1581.39	7.59	2.65	407	402
	10/25/10	<0.5	<0.5	<0.5	<0.2	<0.2	1582.86	7.03	2.53	297	429
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20	1582.18	8.03	2.36	264	385
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.43	7.24	2.56	254	453
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.64	6.93	2.54	284	345
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.60	7.04	2.17	226	397
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1581.83	6.63	3.34		439
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.19	6.97	1.55		325
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.49	6.85	2.83		353
	10/20/15	<0.41	<0.35	<0.37	<0.16	<0.20	1582.93	7.32	2.16	365	304
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.83	7.36	2.74	426	338
	11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.05	8.03	3.14	342	316
	04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.41	8.15	2.16	392	325
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.01	7.60	1.93	381	325
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.06	7.19	2.75	268	393
	10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1583.02	7.14	2.28	436	387
dupl	04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.42	7.14	4.64	375	424
	10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.04	7.10	1.65	319	415
	05/26/20	not sampled									
	10/26/20	not sampled					1583.05				
	04/15/21	not sampled					1582.57				
	10/25/21	not sampled					1582.71				
Top of Casing Elevation = 1604.00 ft MSL											
B-2 (90)	12/06/04	<0.5	<0.4	<0.5	<0.6	<0.3	1580.22	8.86	1.07	157	153
	03/22/05	<0.60	<0.60	<0.4	<0.15	<0.12	1580.39	8.92	1.49	150	155.7
	08/31/05	<0.60	<0.50	<0.4	<0.15	<0.12	1580.39	7.56	1.95	1.64	140.1
	02/14/06	<0.60	<0.60	<0.4	<0.15	<0.12	1580.39	7.89	1.94	155	142
	05/22/06	<0.4	<0.4	<0.29	<0.15	<0.15	1580.44	7.93	2.05	153	229.3
	08/08/06	<0.4	<0.4	<0.29	<0.15	<0.15	1578.26	8.05	1.08	350	362
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1578.79	7.01	1.26		212
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1581.05	7.60	1.47	405	138
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1580.67	7.93	1.11		404
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1578.67	7.14	1.78	316	231
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.48	7.90	1.46	304	382
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1579.91	8.20	0.92	305	229
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.6	7.75	1.55	320	395
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.52	6.49	1.57	343	428
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1581.39	7.92	1.57	189	594
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.66	7.74	2.18	252	421
dupl	10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.34	7.38	1.65	382	423
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1581.79	7.11	2.16	359	432
	10/25/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.21	7.75	2.14	366	424
Top of Casing Elevation = 1603.52 ft MSL											
B-2A (60)	12/06/04	0.5	<0.4	1.2	2.3	<0.3	1580.36	8.62	1.15	166	204.3
	03/22/05	<0.60	<0.60	0.64	1.0	<0.12	1580.32	8.71	1.85	147	205.3
	08/31/05	<0.60	<0.60	0.74	1.1	<0.12	1580.3	7.20	1.84	153	196.6
	02/14/06	<0.60	<0.60	<0.4	0.35	<0.12	1580.34	7.65	1.53	156	202.7
dupl	05/22/06	6.5	<0.4	10	17	<0.15	1580.48	7.98	1.18	153	238.1
	08/08/06	38	<0.4	35	63	<0.15	1578.55	7.62	2.04	397	260
	11/29/06	14	<0.4	31	35	<0.15	1579.06	7.27	1.63		313
dupl	02/26/07	1.3	<0.4	5.3	3.9	<0.15	1581.21	7.16	1.16	429	446
	05/22/07	<0.4	<0.5	2	1.4	<0.15	1581.24	7.89	1.28		417
	08/21/07	0.55	<0.5	1.4	1.7	<0.15	1578.93	6.21	1.36	415	372
	11/28/07	<0.4	<0.5	0.49	0.54	<0.15	1581.62	7.33	1.69	396	409
	07/28/08	<0.4	<0.5	<0.4	0.19	<0.15	1579.94	7.42	1.08	334	341
	11/20/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.19	8.32	2.59	395	479
	02/11/09	<0.4	<0.5	<0.4	0.19	<0.15	1580.71	7.01	2.07	373	497
	05/21/09	<0.4	<0.5	<0.4	0.24	<0.15	1580.54	6.75	1.63	383	517
	08/05/09	<0.4	<0.5	<0.4	<0.15	<0.15	1579.78	6.79	1.39	488	536
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.68	7.19	1.95	343	501
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1581.51	7.63	2.10	201	498
	05/11/10	<0.25	<0.25	<0.3	<0.21	<0.22	1581.35	7.91	1.29	392	477
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.70	7.06	2.25	292	626
	10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.99	7.05	1.54	385	584
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1581.83	7.08	2.22	378	598
	10/25/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.19	7.79	2.12	348	552

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1603.68 ft MSL											
B-2B (23')	12/06/04	6.1	<0.4	9.1	15	<0.3	1581.4	8.40	1.88	169	221.5
	03/22/05	4.7	<0.6	9.0	15	<0.12	1580.87	8.15	1.61	173	206.7
	08/31/05	1.9	<0.60	3.1	6.3	<0.12	1580.85	6.47	2.52	207	143.1
	02/14/06	1.9	<0.60	3.3	5.4	<0.12	1580.83	7.11	1.26	164	165.4
	05/22/06	8.8	<0.4	14	19	<0.15	1581.21	6.78	1.17	157	214.3
	08/08/06	3.1	<0.4	5.2	7.1	<0.15	1579.79	7.23	2.16	467	271
	11/29/06	1	<0.4	2.3	2.7	<0.15	1580.63	7.11	2.17		220
	02/26/07	<0.4	<0.4	0.36	<0.15	<0.15	1581.04	6.86	1.20	425	356
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.46	7.15	1.64		357
	08/21/07	<0.4	<0.5	0.59	0.44	<0.15	1580.37	6.67	1.57	452	298
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.77	6.49	1.58	420	324
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1580.49	6.82	2.07	359	360
	11/20/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.31	7.24	2.17	430	539
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.82	6.98	1.42	387	524
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.29	6.48	1.87	357	457
	08/05/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.38	6.44	2.54	437	382
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.45	6.69	1.91	379	463
	05/11/10	<0.25	<0.25	<0.3	<0.21	<0.22	1581.28	7.10	1.93	376	411
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.82	6.95	3.43	339	272
	10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.07	7.71	1.53	392	374
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.45	7.22	2.71	334	271
	10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.77	7.59	3.13	371	392
Top of Casing Elevation = 1605.16 ft MSL											
B-3 (60')	06/01/00	ND	ND	ND	ND	ND					
	11/01/03	ND	ND	ND	ND	ND					
	12/07/04	<0.5	<0.4	<0.5	<0.6	<0.3	1582.35	9.17	1.16	58	250
	03/23/05	<0.6	<0.6	<0.4	<0.15	<0.12	1581.35	8.81	1.64	128	190.2
	09/01/05	<0.6	<0.6	<0.4	<0.15	<0.12	1581.95	7.61	0.51	242	179.5
dupl	02/15/06	<0.6	<0.6	<0.4	1.8	<0.12	1581.84	8.12	1.43	159	182.9
	05/23/06	<0.4	<0.4	<0.29	<0.15	<0.15	1582.2	8.01	1.69	155	187.5
	08/08/06	0.42	<0.4	0.32	<0.15	<0.15	1581.45	8.03	0.94	334	223
dupl	11/29/06	<0.4	<0.4	0.33	<0.15	<0.15	1581.65	7.22	1.43		196
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1582.24	7.68	1.24	348	230
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.69	7.56	1.31		237
	08/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.67	6.48	1.92	460	237
	11/29/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.35	7.98	1.94	383	231
	07/29/08	<0.4	<0.5	0.64	0.54	<0.15	1581.92	8.03	1.43	308	239
	11/20/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.88	8.44	2.12	301	248
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.9	7.57	1.87	352	239
	05/21/09	<0.4	<0.5	0.76	0.42	<0.15	1582.93	6.40	2.33	366	2.45
	08/05/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.66	7.73	2.84	420	236
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1582.32	7.90	2.57	279	234
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1582.23	8.27	2.89	248	225
	05/12/10	<0.25	<0.25	<0.3	<0.21	<0.22	1582.41	8.55	2.45	261	243
	10/25/10	<0.5	<0.5	<0.5	<0.2	<0.2	1583.42	8.20	2.28	242	240
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20	1582.71	8.11	2.24	236	235
	10/28/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.98	6.76	1.91	239	241
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1583.09	7.11	2.17	237	242
	01/09/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.18	6.93	2.32	257	317
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.75	6.93	2.55		393
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.62	7.18	1.29		304
	04/28/15	<0.12	<0.25	<0.17	<0.19	<0.10	1583.05	6.67	1.97		312
	10/21/15	<0.41	<0.35	<0.37	<0.16	<0.20	1583.45	7.89	1.98	376	274
	05/26/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.56	8.10	2.27	437	293
	11/17/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.58	8.27	2.19	250	272
	04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.87	8.29	2.27	336	265
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.55	8.06	2.24	308	272
	04/27/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.69	7.20	2.84	299	282
	10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1583.53	6.98	2.51	412	297
	04/09/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.07	6.84	4.32	316	286
	10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.62	6.92	2.99	300	314
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.60	7.18	2.92	305	334
	10/27/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.91	7.49	3.08	344	358
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1583.14	7.33	3.13	365	359
	10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1583.26	7.27	3.47	385	361
Top of Casing Elevation = 1605.42 ft MSL											
B-3A (32')	06/01/00	ND	ND	<0.28>	ND	ND					
	11/01/03	ND	ND	<0.70>	ND	ND					
	12/07/04	<0.5	<0.4	<0.5	<0.6	<0.3	1582.50	8.88	1.38	50	324
	03/23/05	1	<0.6	0.74	1.2	<0.12	1581.54	7.38	1.95	342	245
	09/01/05	67	2.1	11	30	8.3	1581.80	6.94	1.68	257	250.8
	02/15/06	39	2.9	6.1	16	4.8	1581.74	7.68	1.61	158	254.3
dupl	05/23/06	74	1.9	3.6	7.9	1.3	1582.11	7.58	1.42	156	245.3
	08/08/06	6.9	1.5	1.5	4.8	0.79	1581.53	7.64	1.16	348	285
	11/29/06	75	2.8	2.1	9.9	1.4	1581.80	7.09	1.37		250
	02/26/07	7.5	1.6	1.2	4.9	0.73	1582.31	7.52	1.70	375	282
	05/22/07	2.1	0.52	1.4	2.4	<0.15	1582.55	7.61	1.23		282
	08/22/07	0.73	<0.5	0.65	0.9	<0.15	1581.76	6.44	2.03	474	317
	11/29/07	0.77	<0.5	0.99	0.93	<0.15	1582.46	7.24	1.87	407	307
	07/29/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.81	7.53	2.16	321	329
	11/20/08	<0.4	<0.5	0.67	0.45	<0.15	1581.93	8.19	1.39	314	318
	02/11/09	<0.4	<0.5	0.74	0.43	<0.15	1581.72	7.32	1.83	364	322
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1582.28	6.38	2.11	378	321

continued on next page

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
		continued from previous page									
B-3A	08/05/09	<0.4	<0.5	0.6	0.39	<0.15	1581.58	6.96	2.78	460	327
	11/19/09	<0.4	<0.5	0.79	0.45	<0.15	1582.21	7.56	2.29	288	318
	02/25/10	<0.4	<0.5	0.82	0.36	<0.15	1582.16	7.84	1.66	250	307
	05/12/10	<0.25	<0.25	0.86	0.34	<0.22	1582.33	8.09	2.19	315	300
	10/25/10	<0.5	<0.5	0.6	0.23	<0.2	1583.36	7.67	2.15	272	325
	04/26/11	<0.5	<0.5	0.58	<0.20	<0.20	1582.64	8.16	2.49	233	396
	10/28/11	<0.50	<0.50	0.66	0.20	<0.20	1582.92	6.87	2.12	243	406
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1583.05	7.13	2.21	239	399
	01/09/14	<0.12	<0.25	0.64	<0.19	<0.10	1583.15	6.88	2.38	228	409
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.68	6.91	2.28		422
	10/29/14	<0.12	<0.25	0.55	<0.19	<0.10	1583.63	6.79	1.31		341
	04/28/15	<0.12	<0.25	0.89	<0.19	<0.10	1583.06	6.62	2.46		375
	10/21/15	<0.41	<0.35	<0.37	<0.16	<0.20	1583.40	7.68	2.06	386	326
	05/26/16	<0.41	<0.35	0.66	0.46	<0.20	1583.53	7.66	2.37	430	382
	11/17/16	<0.41	<0.35	1.2	0.42	<0.20	1583.54	8.12	2.49	345	355
	04/28/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.91	8.00	2.02	363	354
	10/31/17	<0.41	<0.35	0.64	<0.16	<0.20	1583.49	7.47	2.16	320	353
	04/27/18	<0.41	<0.35	0.71	0.25	<0.20	1582.68	7.26	2.13	298	348
	10/30/18	<0.21	<0.23	0.50 J	<0.20	<0.18	1583.48	6.99	2.65	419	367
	04/09/19	<0.41	<0.35	0.71 J	<0.16	<0.20	1583.05	6.82	4.27	331	361
10/29/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.57	6.90	2.87	303	395	
05/26/20	<0.41	<0.35	0.60 J	<0.16	<0.20	1583.56	7.31	2.64	328	442	
10/27/20	<0.41	<0.35	0.44 J	<0.16	<0.20	1583.56	7.78	3.40	306	448	
04/15/21	<0.41	<0.35	0.64 J	0.24 J	<0.20	1583.16	7.36	2.98	373	457	
10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1583.21	7.32	3.82	403	493	
		Top of Casing Elevation = 1599.02 ft MSL									
B-5 (20')	12/06/04	<0.5	<0.4	<0.5	<0.6	<0.3	1583.16	8.06	1.23	177	235.8
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.71	6.75	2.28	366	357
	10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.10	7.55	2.62	398	309
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.22	7.26	3.09	405	350
	10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.44	7.39	3.10	431	378
		Top of Casing Elevation = 1602.86 ft MSL									
B-8 (30')	12/06/04	<0.5	<0.4	<0.5	<0.6	<0.3	1582.38	8.20	0.86	-36	642.1
	03/22/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.43	8.17	1.37	-36	631.6
	08/31/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.09	6.52	1.55	137	472.8
	02/14/06	<0.60	<0.60	<0.4	<0.15	<0.12	1581.56	6.89	1.48	145	566.4
	05/22/06	<0.4	<0.4	<0.29	<0.15	<0.15	1582.27	7.13	1.32	142	570.5
	08/08/06	<0.4	<0.4	<0.29	<0.15	<0.15	1580.93	8.29	1.25	180	663
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1581.31	7.17	1.43		430
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1581.59	7.29	1.15	104	657
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.03	7.61	1.89		579
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.12	6.07	1.36	174	700
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.27	6.44	1.93	176	755
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.68	6.46	1.98	147	725
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.33	6.74	2.08	123	778
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1582.55	7.42	2.49	201	7.13
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1581.81	6.60	1.02	120	838
	05/11/10	<0.25	<0.25	<0.3	<0.21	<0.22	1582.02	6.87	1.73	131	785
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.73	7.24	1.82	135	716
	10/26/20	not sampled					1583.41				
	04/15/21	not sampled					1582.93				
	10/25/21	not sampled					1582.94				
		Top of Casing Elevation = 1603.37 ft MSL									
B-8A (62')	12/06/04	<0.5	<0.4	<0.5	<0.6	<0.3	1581.02	8.83	1.32	117	444.5
	03/22/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.08	8.88	1.44	-56	394.1
	08/31/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.00	7.22	1.98	109	271.5
	02/14/06	<0.60	<0.60	<0.4	0.34	<0.12	1580.93	7.56	1.95	163	269.3
	05/22/06	<0.4	<0.4	<0.29	0.33	<0.15	1581.15	7.65	2.06	154	286.6
	08/08/06	<0.4	<0.4	<0.29	<0.15	<0.15	1579.14	8.35	1.37	234	332
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1580.90	7.58	1.34		302
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1581.36	7.21	1.03	351	422
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.66	7.66	1.25		447
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1579.69	6.02	0.82	439	523
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1580.90	7.08	1.50	375	541
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1580.96	7.30	1.57	305	488
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.10	7.21	1.61	327	436
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.65	6.93	1.68	349	440
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.45	7.17	1.94	367	476
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1581.54	7.72	1.98	263	462
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.06	7.82	2.07	448	599
	10/26/20	not sampled					1583.10				
	04/15/21	not sampled					1582.64				
	10/25/21	not sampled					1582.63				

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1598.47 ft MSL											
B-9 (62')	12/06/04	<0.5	<0.4	<0.5	<0.6	<0.3	1586.41	8.42	1.04	165	158.9
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1585.51	7.51	1.12		191
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1586.17	7.61	1.74	410	206
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1596.48	7.58	1.21		358
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1585.22	6.50	2.30		376
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1586.36	6.54	1.23		392
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1578.88	6.88	2.18		291
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.73	6.06	1.62		358
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1580.06	7.90	1.72		244
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.83	7.08	2.17		332
	10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1581.79	7.59	1.57		391
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.36	7.45	2.21		435
10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.58	7.56	2.11		433	
Top of Casing Elevation = 1601.25 ft MSL											
B-10 (52')	12/07/04	<0.5	<0.4	<0.5	<0.6	<0.3	1582.14	9.36	1.03	123	166
	10/25/10	<0.5	<0.5	<0.5	<0.2	<0.2	1582.36	7.90	1.27	230	209
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20	1581.87	8.27	2.41		263
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.48	6.95	1.56		257
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.29	6.98	2.13		249
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.24	7.09	1.97		289
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1581.64	6.73	2.35		313
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.18	7.54	0.97		308
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.52	6.70	2.28		212
	10/20/15	<0.41	<0.35	<0.37	<0.16	<0.20	1582.54	7.45	1.26		353
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.88	7.70	1.79		417
	11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.07	8.16	1.92		344
	04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.21	8.18	2.24		392
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1582.75	7.84	2.32		380
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.11	7.07	2.15		243
	10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1583.00	7.07	2.11		420
	04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.18	7.05	2.63		325
	10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.08	7.18	2.51		295
05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.70	7.17	2.37		307	
10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.07	7.68	1.53		340	
04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.61	7.40	2.04		383	
10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.84	7.28	2.80		392	
Top of Casing Elevation = 1601.44 ft MSL											
B-11 (27')	12/07/04	<0.5	<0.4	<0.5	<0.6	<0.3	1582.29	8.98	1.33	119	276.4
	10/26/10	<0.5	<0.5	<0.5	<0.2	<0.2	1582.61	7.13	2.14		231
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20	1582.15	8.04	2.50		214
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.43	6.93	2.00		225
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.56	7.00	2.08		227
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.41	6.91	2.37		271
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1581.86	6.65	2.58		332
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.15	6.79	0.85		314
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.50	6.79	2.38		275
	10/20/15	<0.41	<0.35	<0.37	<0.16	<0.20	1582.72	7.08	2.23		289
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.85	7.26	2.19		441
	11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.05	7.85	2.54		270
	04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.40	7.92	2.07		371
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1582.80	7.40	1.74		382
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.12	6.94	2.31		266
	10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1582.98	7.06	2.31		377
	04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.36	6.99	4.56		338
	10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.07	7.16	2.50		306
05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.91	6.42	2.28		337	
10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.05	7.72	2.49		329	
04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.60	7.59	2.66		394	
10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.82	7.35	2.52		380	
Top of Casing Elevation = 1604.03 ft MSL											
B-12 (42')	12/07/04	<0.5	<0.4	<0.5	<0.6	<0.3	1582.19	8.95	1.26	127	1731
	10/25/10	<0.5	<0.5	0.62	<0.2	<0.2	1582.66	7.57	1.52		292
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20	1582.14	8.11	2.55		300
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.32	6.99	1.64		287
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.53	7.03	1.95		294
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.27	7.14	1.88		300
	04/10/14	2.2	<0.25	<0.17	0.53	<0.10	1581.72	6.81	2.44		329
	10/28/14	1.4	<0.25	<0.17	0.29	<0.10	1583.08	6.71	1.24		287
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.40	6.83	2.19		227
	10/20/15	<0.41	<0.35	<0.37	<0.16	<0.20	1582.65	7.10	1.65		325
	05/24/16	3.0	<0.35	<0.37	0.74	<0.20	1582.76	7.33	1.94		442
	11/16/16	1.8	<0.35	<0.37	0.47	<0.20	1582.17	7.99	2.85		361
	duplicate 04/27/17	77	<0.35	<0.37	9.0	<0.20	1583.41	7.77	2.27		430
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1582.69	7.40	2.30		373
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1581.96	7.13	2.17		247
	10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1582.89	7.14	2.88		429
	04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.29	7.07	2.53		329
	10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.96	7.24	2.58		289
05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.89	6.91	2.89		310	
10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.32	7.03	1.84		315	
04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.49	7.22	2.06		350	
10/25/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.74	7.31	2.08		392	

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity	
ES		70	100	5	5	0.2						
PAL		7	20	0.5	0.5	0.02						
		Top of Casing Elevation = 1604.81 ft MSL										
MW-12A (87.8')	08/09/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.77	-	-	-	-	
	10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.68	7.45	1.50	370	239	
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.45	7.39	2.05	388	244	
	10/25/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.8	7.29	2.69	417	220	
		Top of Casing Elevation = 1604.74 ft MSL										
MW-12B (29.3')	08/09/20	<0.41	<0.35	<0.37	<0.16	<0.20	1582.73	-	-	-	-	
	10/26/20	<0.41	<0.35	<0.37	0.34 J	<0.20	1582.97	7.11	2.27	343	249	
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.47	7.35	2.07	393	219	
	10/25/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.63	7.26	3.02	4.01	202	
		Top of Casing Elevation = 1596.70 ft MSL										
B-13 (25')	11/01/93	310	4.5	470	290	32						
	01/01/94	nd	nd	nd	nd	nd						
	07/01/94	180	nd	200	210	210						
	01/01/95	14	nd	320	22	22						
	06/01/95	290	nd	510	210	210						
	01/01/96	230	24	950	210	210						
	06/01/96	200	nd	590	200	200						
	01/01/97	210	nd	590	160	160						
	10/01/97	53	nd	1100	49	49						
	04/01/98	1100	nd	1100	1100	1100						
	11/01/98	527	nd	1100	28	28						
	06/01/99	520	nd	420	360	360						
	06/01/00	15	nd	510	13	13						
	01/01/01	1000	14	1000	830	830						
	12/01/01	68	nd	320	47	47						
	06/01/02	52	nd	580	44	44						
	12/01/02	510	nd	290	190	190						
	11/03/03	400	nd	460	260	260						
	Pump test	11/09/04	530	10	370	330	35	1583.52				
	Pump test	11/09/04	520	9.1	330	300	32	1577.79				
	Pump test	11/09/04	550	11	380	320	38	1577.80				
		12/08/04	310	6.6	48	150	13	1583.42	8.47	1.48	88	442
		03/23/05	49	4.8	29	29	2.7	1582.46	9.10	1.58	141	311
		09/01/05	30	6.1	37	25	0.59	1582.53	6.87	1.12	180	224.7
		02/15/06	49	<6.0	92	20	<1.2	1582.45	7.23	1.14	157	251
		05/23/06	29	<4.0	140	24	<1.5	1582.86	7.29	0.97	154	258.8
		08/08/06	27	<4.0	92	39	<1.5	1582.58	7.70	0.97	285	381
		11/29/06	48	5	33	52	1.5	1582.77	7.28	1.23	268	268
		02/26/07	97	1.3	98	63	<0.30	1583.16	7.04	1.33	359	427
		05/22/07	40	<1.0	61	27	<0.3	1583.20	7.60	1.16	444	370
		08/22/07	29	0.55	34	18	<0.15	1582.62	5.73	1.56	444	355
		11/29/07	4.5	<0.5	15	5.3	<0.15	1583.12	6.72	1.70	406	294
	Otr	07/29/08	9.6	<0.5	34	9.3	<0.15	1582.59	6.75	1.82	344	406
	Pilot Study	09/11/08	9.3	<0.5	16	7.1	<0.15	1582.58	7.13	2.41	316	372
	Pilot Study	10/09/08	9.9	<0.5	22	8.1	<0.15	1582.95	7.55	2.15	308	379
	Otr	11/21/08	14	<0.5	15	5.9	<0.15	1582.90	7.66	2.01	364	378
	Pilot Study	12/17/08	1.9	<0.50	13	3.7	<0.15	1582.89	8.12	1.48	312	257
	Otr	02/11/09	0.58	<0.5	37	1.6	<0.15	1582.43	7.53	1.49	414	297
	Otr	05/21/09	15	<0.5	46	9.6	<0.15	1582.93	6.47	2.10	357	394
	Pilot Study	08/05/09	370		170	170	0.7	1582.29	6.19	1.49	441	580
	Otr	11/19/09	120	1.4	100	68	<0.3	1582.89	6.48	1.75	402	446
		02/25/10	56	0.69	54	33	<0.15	1582.98	7.18	1.66	251	407
	05/12/10	23	0.3	33	14	<0.22	1583.02	7.28	1.55	233	410	
	10/25/10	93	<1.0	120	44	0.64	1584.19	6.53	1.42	185	700	
	04/26/11	35	<0.50	25	31	2.6	1583.46	7.79	2.06	152	559	
B-13 (35')	10/28/11	240	2.7	150	130	0.94	1583.62	7.28	1.72	165	593	
	04/27/12	18	<0.25	24	11	1.1	1583.73	7.25	1.58	172	601	
	01/09/14	65	0.57	35	26	11	1583.86	7.22	1.96	181	611	
	04/10/14	63	<0.25	22	12	5.7	1583.55	7.02	2.46		580	
	10/29/14	210	2.2	100	100	48	1584.36	6.43	0.97		396	
	04/28/15	19	<0.25	57	24	1.9	1583.82	6.67	2.07		336	
	10/21/15	18	<0.35	22	12	2.3	1584.08	6.80	1.89	287	374	
	05/26/16	47	<0.35	440	32	2.2	1584.29	7.19	2.24	403	371	
	11/17/16	250	2.2	150	73	38	1584.22	7.69	2.58	300	389	
	04/28/17	8.8	<0.35	39	4.8	<0.20	1584.69	7.27	1.84	367	287	
	10/31/17	84	0.68	64	43	1.1	1584.22	6.89	2.36	246	405	
	04/27/18	29	<0.35	35	15	<0.20	1583.54	7.08	2.10	303	299	
	10/30/18	77	0.79 J	84	48	<0.18	1584.23	6.98	2.27	427	394	
	04/09/19	44	<0.35	44	28	<0.20	1583.90	7.10	3.56	382	324	
	10/29/19	3.7	<0.35	17	3.8	<0.20	1584.31	7.00	2.65	329	295	
	05/26/20	36	<0.35	45	26	<0.20	1584.29	7.36	2.07	345	297	
	10/27/20	34	<0.35	30	18	<0.20	1584.32	7.83	1.93	325	311	
	04/15/21	<0.41	<0.35	12	0.35 J	<0.20	1583.96	7.66	2.18	439	268	
	10/26/21	0.93 J	<0.35	11	1.4	<0.20	1583.99	7.24	2.20	452	313	

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1596.33 ft MSL											
B-13A (62')	12/08/04	1.5	<0.4	<0.5	<0.6	<0.3	1582.22	9.12	1.45	64	2.46.4
	03/23/05	0.95	<0.6	<0.4	<0.15	<0.12	1581.25	9.38	1.36	141	191.5
	09/01/05	1	<0.6	<0.4	2.6	<0.12	1581.56	7.58	0.67	148	160
	02/15/06	1	<0.60	0.62	2.8	<0.12	1581.43	7.73	1.75	156	150.6
	05/23/06	0.99	0.44	<0.29	3.7	<0.15	1581.83	8.26	1.01	153	146.2
	08/08/06	1.1	0.42	<0.29	3.5	<0.15	1581.60	8.29	1.19	225	166
	11/29/06	1.6	<0.4	<0.29	2.7	0.25	1581.57	7.61	1.17		149
	02/26/07	0.41	<0.4	0.3	0.93	<0.15	1582.19	7.64	1.51	353	172
	05/22/07	<0.4	<0.5	<0.4	0.54	<0.15	1582.25	7.33	1.28		207
	08/22/07	<0.4	<0.5	<0.4	0.42	<0.15	1581.67		1.68	371	227
	11/29/07	<0.4	<0.5	<0.4	0.23	<0.15	1582.13	7.69	1.18	352	204
Qtr	07/29/08	<0.4	<0.5	<0.4	0.19	<0.15	1581.61	8.03	1.79	308	241
Pilot Study	09/11/08	<0.4	<0.5	<0.4	0.26	<0.15	1581.55	8.20	2.53	248	223
Pilot Study	10/09/08	<0.4	<0.5	<0.4	0.26	<0.15	1581.85	8.67	2.20	251	225
Qtr	11/21/08	0.43	<0.5	0.42	<0.15	<0.15	1581.77	8.31	1.84	300	227
Pilot Study	12/17/08	0.41	<0.50	<0.40	0.25	<0.15	1581.84	8.27	1.43	297	233
Qtr	02/11/09	0.51	<0.5	<0.4	0.32	<0.15	1581.39	7.67	1.96	401	237
Qtr	05/21/09	0.53	<0.5	0.75	0.29	<0.15	1582.09	6.43	1.82	363	246
Pilot Study	08/05/09	1.4	<0.5	3.5	1.5	<0.15	1581.32	7.61	1.51	396	237
Qtr	11/19/09	0.79	<0.5	1.8	0.69	<0.15	1581.92	7.55	1.17	229	240
	02/25/10	0.6	<0.5	<0.4	<0.15	<0.15	1581.96	7.98	1.21	203	239
	05/12/10	0.64	<0.25	0.61	0.29	<0.22	1581.96	8.56	1.21	256	246
	10/25/10	0.74	<0.5	1.8	0.57	<0.2	1582.79	8.07	2.15	205	246
	04/26/11	0.64	<0.50	<0.50	0.45	<0.20	1582.31	8.29	1.92	179	249
	10/28/11	1.2	<0.50	2.3	1.3	<0.20	1582.47	6.95	2.25	188	253
	04/27/12	<0.12	<0.25	<0.17	0.34	<0.10	1582.63	7.07	1.72	191	250
	01/09/14	<0.12	<0.25	0.56	0.33	<0.10	1582.68	7.11	1.83	190	342
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.34	6.98	2.23		391
	10/29/14	<0.12	<0.25	0.78	0.46	<0.10	1583.10	7.26	0.90		291
	04/28/15	<0.12	<0.25	0.63	<0.19	<0.10	1582.73	7.14	2.18		295
	10/21/15	<0.41	<0.35	<0.37	<0.16	<0.20	1582.98	7.54	1.92	287	306
	05/26/16	<0.41	<0.35	3.3	0.46	<0.20	1583.19	7.98	1.65	352	313
	11/17/16	<0.41	<0.35	1.4	0.36	<0.20	1583.18	8.13	1.84	265	312
	04/28/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.51	8.26	2.13	340	314
	10/31/17	<0.41	<0.35	0.81	<0.16	<0.20	1583.14	7.93	2.39	306	318
	04/27/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.32	6.95	2.26	297	327
	10/30/18	<0.21	<0.23	0.94 J	0.33 J	<0.18	1583.12	6.97	2.53	416	335
	04/09/19	<0.41	<0.35	0.50 J	0.19 J	<0.20	1582.66	7.08	2.65	368	346
	10/29/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.22	7.12	2.78	302	359
	05/26/20	<0.41	<0.35	0.50 J	0.25 J	<0.20	1583.17	7.54	2.46	338	334
	10/27/20	<0.41	<0.35	<0.37	0.21 J	<0.20	1583.23	7.41	2.88	320	324
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.82	7.02	2.27	393	320
	10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1582.85	7.19	2.26	406	552
Top of Casing Elevation = 1596.16 ft MSL											
B-13B (92')	12/08/04	0.92	<0.4	<0.5	<0.6	<0.3	1582.48	9.34	1.25	44	497.8
	03/23/05	<0.6	<0.6	<0.4	<0.15	<0.12	1581.24	8.40	1.77	173	197.8
	09/01/05	<0.6	<0.6	<0.4	<0.15	<0.12	1581.68	7.57	1.41	253	144
	02/15/06	<0.6	<0.6	<0.4	<0.15	<0.12	1581.51	8.18	1.30	156	151.9
	05/23/06	<0.4	<0.4	<0.29	<0.15	<0.15	1581.93	8.10	1.13	153	144.9
	08/08/06	<0.4	<0.4	0.32	<0.15	<0.15	1581.74	7.83	0.74	326	168
	11/29/06	<0.4	<0.4	0.32	<0.15	<0.15	1581.65	7.32	1.25		159
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1582.37	7.58	1.72	349	172
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.44	7.27	1.33		191
	08/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.88	5.89	2.04	370	205
	11/29/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.27	7.90	1.64	353	200
	07/29/08	<0.4	<0.5	<0.4	<0.15	<0.15	1581.79	8.02	1.58	279	207
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.51	7.69	1.89	360	198
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.96	6.35	1.91	364	208
	11/19/09	<0.4	<0.5	0.66	<0.15	<0.15	1582.05	7.68	1.83	249	200
	02/25/10	<0.4	<0.5	0.51	0.18	<0.15	1582.01	8.12	1.73	212	201
	05/12/10	<0.25	<0.25	<0.3	<0.21	<0.22	1582.09	8.66	1.92	277	213
	10/25/10	<0.5	<0.5	<0.5	<0.2	<0.2	1582.82	7.80	1.56	276	210
	04/26/11	<0.5	<0.5	<0.5	<0.2	<0.2	1582.42	8.08	1.74	191	238
	10/28/11	<0.50	<0.50	0.83	0.44	<0.20	1582.52	6.82	1.97	204	224
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.70	7.13	1.66	202	229
	01/09/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.70	7.15	1.84	198	365
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.43	7.08	1.93		399
	10/29/14	<0.12	<0.25	<0.17	<0.19	<0.10	1583.07	7.24	0.96		338
	04/28/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.78	6.86	1.89		339
	10/21/15	<0.41	<0.35	<0.37	<0.16	<0.20	1583.04	7.62	1.77	335	369
	05/26/16	<0.41	<0.35	1.2	<0.16	<0.20	1583.23	7.96	2.08	417	367
B-13B	11/17/16	<0.41	<0.35	0.62	<0.16	<0.20	1583.24	8.14	2.39	327	408
	04/28/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.53	8.34	2.19	351	588
	10/31/17	<0.41	<0.35	0.56	<0.16	<0.20	1583.21	8.07	2.28	332	431
	04/27/18	<0.41	<0.35	1.3	0.43	<0.20	1582.38	7.02	2.91	304	503
	10/30/18	<0.21	<0.23	1.2	<0.20	<0.18	1583.20	6.97	2.01	419	450
	04/09/19	<0.41	<0.35	1.7	0.57	<0.20	1582.71	7.09	2.23	354	471
	10/29/19	<0.41	<0.35	2.6	0.74	<0.20	1583.25	7.01	1.99	336	538
	05/26/20	<0.41	<0.35	2.5	1.9	<0.20	1583.22	7.72	2.57	346	716
	10/27/20	<0.41	<0.35	1.6	1.4	<0.20	1583.27	7.69	1.78	307	618
	04/15/21	<0.41	<0.35	3.9	2.3	<0.20	1582.89	7.20	2.08	388	808
	10/26/21	<0.41	<0.35	3.5	0.96	<0.20	1582.86	7.19	2.26	406	552

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity	
ES		70	100	5	5	0.2						
PAL		7	20	0.5	0.5	0.02						
B-15 (42')	12/07/04	Top of Casing Elevation = 1601.77 ft MSL						1583.36	8.73	1.19	136	410.9
EXW-2	06/01/00	4.3	ND	3.2	7.9	<0.16>						
	01/01/01	4	<0.18>	3.4	7.3	<0.18>						
	12/01/01	4.5	ND	5.6	8.6	ND						
	06/01/02	4.9	<0.21>	1.9	7.3	ND						
	12/01/02	5	ND	1.2	5.3	ND						
	11/01/03	6.8	ND	3.4	6.9	0.53						
	12/06/04	5.2	<0.4	1.9	4.5	<0.3						
	03/23/05	<0.6	<0.6	<0.4	<0.15	<0.12		9.03	1.56	-64	775.3	
	09/01/05	<0.6	<0.6	<0.4	<0.15	<0.12		7.46	1.15	19	562.3	
	02/15/06	<3.0	<3.0	<2.0	<0.75	<0.6		7.47	1.92	151	730.9	
	05/23/06	0.41	<0.4	0.33	0.35	<0.15		7.62	0.84	142	123.6	
	08/22/06	<0.4	<0.4	<0.29	<0.15	<0.15		8.72	1.38	78	144	
EXW-4	03/22/05	0.78	<0.6	0.87	1.2	<0.12						
	09/01/05	<0.6	<0.6	<0.4	<0.15	<0.12						
	05/23/06	9.7	<0.4	6	11	0.37		8.23	1.50	156	209.7	
	08/08/06	5.1	<0.4	4.1	5.5	0.17		8.59	1.76	159	222	
	11/29/06	4.1	<0.4	3.7	5.5	0.16		7.17	1.71		215	
	02/26/07	2.5	<0.4	2.5	3.2	<0.15		8.08	2.51	39	250	
	05/23/07	2.2	<0.5	2.3	2.8	<0.15		7.57	1.49		268	
	08/22/07	1.2	<0.5	1.3	1.6	<0.15		6.95	2.01	342	234	
	11/29/07	1.5	<0.5	1.6	2.2	<0.15		7.76	2.23	139	285	
	07/29/08	1.3	<0.5	0.55	2.1	<0.15		8.07	2.85	305	279	
	11/20/08	1	<0.5	0.7	1.5	<0.15		8.30	1.19	304	311	
	02/11/09	0.93	<0.5	0.44	1.2	<0.15		7.93	1.69	349	335	
	05/21/09	2.3	<0.5	1.2	2.6	<0.15		7.71	2.39	225	317	
	08/05/09	2	<0.5	1.1	2.1	<0.15		7.52	1.91	291	281	
	11/19/09	0.76	<0.5	0.61	1	<0.15		7.80	2.53	239	289	
	02/25/10	0.67	<0.5	0.5	0.77	<0.15		7.97	2.18	211	308	
	05/11/10	0.64	<0.25	0.45	0.7	<0.22		8.31	2.56	359	321	
	10/25/10	0.91	<0.5	0.96	1.1	<0.2		7.70	2.74	181	346	
	04/26/11	1.9	<0.50	0.61	2.1	<0.20		8.26	2.67	143	326	
	10/27/11	0.92	<0.50	<0.50	0.82	<0.20		7.11	2.08	176	355	
	04/27/12	<0.12	<0.25	<0.17	0.35	<0.10		7.15	2.13	172	349	
	01/08/14	0.67	<0.25	<0.17	0.62	<0.10		7.06	2.13	125	359	
	04/10/14	0.91	<0.25	<0.17	0.76	<0.10		6.71	2.33		376	
	10/28/14	0.99	<0.25	<0.17	0.99	<0.10		7.29	1.37		328	
	04/27/15	<0.12	<0.25	<0.17	1.7	<0.10		6.60	2.02		311	
	10/22/15	1.1	<0.35	<0.37	1.1	<0.20		7.48	2.14	246	375	
	05/25/16	1.7	<0.35	<0.37	1.8	<0.20		7.66	2.15	296	384	
	11/16/16	1.5	<0.35	<0.37	1.4	<0.20		8.01	4.04	259	272	
	10/31/17	1.9	<0.35	<0.37	1.4	<0.20		7.79	3.53	362	378	
	04/26/18	1.7	<0.35	<0.37	1.3	<0.20		7.09	3.16	256	377	
	10/30/18	1.6	<0.23	0.22 J	0.92 J	<0.18		7.14	2.79	425	376	
	04/08/19	1.3	<0.35	<0.37	1.0	<0.20		6.90	5.07	360	367	
	10/28/19	1.3	<0.35	<0.37	0.99	<0.20		7.20	2.58	308	384	
	05/26/20	2.2	<0.35	<0.37	1.4	<0.20		6.65	3.21	315	387	
	10/26/20	1.5	<0.35	0.43 J	1.30	<0.20		7.37	2.55	374	412	
	04/15/21	1.5	<0.35	0.45 J	1.3	<0.20		7.58	2.08	407	396	
	10/26/21	1.8	<0.35	<0.37	1.6	<0.20		7.28	2.09	386	398	
EXW-5	11/01/93	32	ND	48	48	ND						
	01/01/94	ND	ND	48	48	ND						
	07/01/94	6.2	ND	6.7	ND	14						
	01/01/95	35	ND	32	57	ND						
	06/01/95	ND	ND	96	110	19						
	01/01/96	18	ND	17	19	ND						
	06/01/96	28	1.7	2.4	20	ND						
	01/01/97	59	3.8	28	36	ND						
	10/01/97	68	ND	36	49	ND						
	04/01/98	58	ND	31	33	ND						
	11/01/98	110	ND	38	54	ND						
	06/01/99	150	ND	<9.3>	24	ND						
	12/01/99	2.5	ND	<0.42>	0.98	ND						
	06/01/00	160	1.6	19	32	ND						
	01/01/01	16	<0.29>	5.8	10	ND						
	12/01/01	19	ND	5.6	8.6	ND						
	06/02/02	54		11	24	3.3						
	12/01/02	57	ND	8.6	18	ND						
	12/06/04	61	<0.4	<1.0	<1.2	11						

continued on next page

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
		continued from previous page									
	03/23/05	38	<1.2	1.6	9	2.7		8.97	1.14	-72	417.5
	09/01/05	29	<0.6	<0.40	0.48	2.1		7.16	1.06	64	112.7
	02/15/06	33	<0.6	0.42	1.2	4.5		7.41	1.90	150	112.8
	05/23/06	51	<0.8	4.5	8.9	5.2		7.49	1.81	145	160.5
	08/08/06	33	0.62	1.7	3.3	3.7		8.44	0.97	80	128
	11/29/06	33	0.46	17	18	7		7.38	1.19		168
	02/26/07	2.3	<0.4	<0.29	1.4	0.4		7.60	1.01	110	146
	05/22/07	1.5	<0.5	<0.4	0.35	0.4		7.69	1.34		168
EXW-5	08/22/07	1.5	<0.5	<0.4	0.21	1.3		6.69	2.14	121	116
	11/29/07	2.7	<0.5	<0.4	0.25	1.2		7.35	1.84	88	106
	07/29/08	2.3	<0.5	<0.4	<0.15	0.56		7.44	1.23	51	141
		Well Abandoned									
EXW-6	02/26/07	43	1.1	23	19	2.4		7.90		293	224
	05/22/07	44	0.99	25	18	2.2		7.55	1.52		239
	08/22/07	34	0.67	16	12	1.6		6.65	2.34	231	225
	11/29/07	36	0.69	20	14	1.2		7.24	1.71	277	285
	07/29/08	32	0.55	23	14	0.79		7.45	1.87	137	228
	09/11/08	26	<0.5	16	12	0.69		7.87	2.23	254	224
	10/09/08	34	0.53	19	15	1.1		8.02	2.03	253	228
	11/20/08	27	<0.5	15	13	0.94		7.95	1.87	385	233
	12/17/08	23	<0.50	14	12	0.51		8.04	2.29	303	226
	02/11/09	25	<0.5	18	14	<0.15		8.02	1.98	377	240
	05/21/09	22	<0.5	16	13	0.77		7.56	2.12	356	230
	08/05/09	30	<0.5	16	13	1.9		6.70	2.37	351	241
	11/19/09	32	0.6	17	16	2.3		7.47	2.45	307	231
	02/25/10	22	<0.5	13	12	0.86		8.12	1.69	226	227
	05/11/10	23	0.42	13	11	2.3		7.86	1.62	278	234
	10/25/10	24	<0.5	13	13	3.2		7.28	1.73	221	249
	04/26/11	20	<0.50	13	12	1.4		8.28	2.33	304	269
	10/27/11	24	<0.50	16	16	2.4		7.06	1.42	216	270
	04/27/12	23	0.50	7.0	9.2	3.2		7.12	1.85	218	263
	01/08/14	19	<0.25	6.9	12	1.6		7.27	2.09	227	417
	04/10/14	<0.12	<0.25	<0.17	0.87	<0.10		6.59	2.17		444
	10/28/14	18	<0.25	8.6	12	1.6		7.44	1.81		310
	04/27/15	18	<0.25	5.9	12	1.7		6.52	1.94		327
	10/20/15	16	<0.35	6.0	8.8	1.4		7.44	2.18	367	289
	05/25/16	24	1.3	<0.37	0.80	6.3		7.96	1.84	65	412
	11/16/16	17	<0.35	8.1	9.5	1.1		7.90	2.34	322	300
	04/27/17	19	<0.35	7.0	11	1.1		7.76	2.42	397	300
	10/31/17	18	<0.35	6.0	10	1.2		7.68	2.65	374	299
	04/26/18	19	<0.35	7.6	13	1.3		7.03	2.19	262	298
	10/30/18	16	<0.23	6.7	9.3	0.92 J		7.01	2.34	439	292
	04/08/19	<0.41	<0.35	<0.37	1.0	<0.20		7.21	4.02	338	374
	10/28/19	16	<0.35	4.7	8.7	<0.20		7.04	2.38	357	286
	05/26/20	18	<0.35	4.0	10	0.85 J		6.74	2.49	347	290
	10/26/20	15	<0.35	3.2	7.6	0.88 J		7.47	2.25	299	288
	04/15/21	18	<0.35	2.9	9.0	0.97 J		7.28	2.27	409	290
	10/26/21	17	<0.35	2.2	6.6	0.80 J		7.26	2.47	413	275
Muni #4	10/27/20	<0.41	<0.35	<0.37	<0.16	<0.20		7.71	1.97	300	299
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20		7.12	2.48	474	281
	10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20		7.04	2.21	412	288
MW-16	11/01/93	ND	ND	ND	ND	ND					
	01/01/94	ND	ND	ND	ND	ND					
	07/01/94	ND	ND	ND	ND	ND					
	01/01/95	ND	ND	ND	ND	ND					
	06/01/95	ND	ND	ND	ND	0.71					
	01/01/96	ND	ND	ND	ND	ND					
	06/06/96	ND	1.3	ND	ND	ND					
	01/01/97	ND	ND	ND	ND	ND					
	10/01/97	ND	ND	0.54	ND	ND					
	04/01/98	ND	ND	1	ND	ND					
	11/01/98	ND	ND	ND	ND	ND					
	06/01/99	Lost Well									

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1591.80 ft MSL											
MW-17 (18')	11/01/93	230	3.5	23	40	1.2					
	01/01/94	400	ND	40	58	ND					
	07/01/94	380	ND	44	40	ND					
	01/01/95	12	ND	0.53	112	ND					
	06/01/95	ND	ND	380	53	12					
	01/01/96	180	40	32	31	ND					
	06/06/96	290	13	80	40	6.7					
	01/01/97	860	7	33	53	3.2					
	10/01/97	270									
	04/01/98	84	ND	11	9.4	ND					
	11/01/98	290	4.5	24	37	2.8					
	06/01/99	170	ND	<9.7>	23	ND					
	12/01/99	420	ND	ND	26	ND					
	06/01/00	220	ND	ND	ND	ND					
	01/01/01	270	<7.0>	ND	<8.7>	<4.4>					
	12/01/01	200	<5.0>	<5.2>	<4.8>	ND					
	06/01/02	180	<5.7	9.4	8.9	ND					
	12/01/02	230	ND	<13>	43	<5.1>					
	11/01/03	390	<13>	ND	ND	ND					
	12/07/04	220	7.5	6.8	14	4.7	1583.11	8.64	1.46	-32	230
	03/23/05	84	3.4	7.8	6.7	2.6	1582.17	8.90	1.76	16	252.4
	09/01/05	330	9.1	1.4	5	23	1582.31	6.65	1.78	204	240
	02/15/06	140	4.6	4.3	1.9	2.9	1582.12	7.32	1.75	153	196.4
	05/23/06	98	<4.0	5.9	5.8	4	1582.75	7.24	1.68	152	171.9
	08/08/06	290	5.7	7.9	12	12	1582.80	7.44	1.58	2.57	264
	11/29/06	190	4.6	11	25	8.7	1582.54	7.38	1.67		249
	02/26/07	230	4	<2.9	18	15	1582.82	7.16	1.49	216	253
	05/23/07	100	4.9	2.4	3	9.2	1583.11	7.66	1.88		236
	08/22/07	130	<2.5	6.1	18	10	1582.56	6.20	2.23	2.04	309
	11/29/07	110	4.5	3.8	5.8	11	1582.89	6.62	2.18	255	263
Qtr	07/29/08	100	6.7	4	3.5	12	1582.82	6.83	2.35	209	272
Pilot Study	09/11/08	180	3	4.3	22	18	1582.45	6.39	1.87	229	487
Pilot Study	10/09/08	150	3	<2.0	<0.75	14	1582.71	6.56	2.57	195	616
	11/21/2008	99	2.7	<2.0	<0.75	10	1582.59	7.08	1.55	150	633
Pilot Study	12/17/2008	120	5.4	<2.0	<0.75	14	1582.39	7.05	2.11	149	657
Qtr	2/11/2009	78	2.4	1.7	2.1	29	1582.41	7.43	1.37	225	426
Qtr	5/21/2009	63	3.5	1.3	0.72	49	1582.97	8.63	2.10	172	400
Pilot Study	8/5/2009	180	1.7	6.8	43	91	1582.26	5.98	2.90	181	512
Qtr	11/19/2009	8.6	<0.5	0.85	2.2	45	1582.67	6.28	2.10	182	494
	02/25/10	14	<0.5	0.85	0.35	41	1582.45	6.62	1.98	217	5.9
	05/11/10	11	0.25	0.41	0.24	26	1582.67	6.89	1.47	244	386
	10/25/10	6.5	<0.5	<0.5	1.4	41	1583.43	6.28	2.14	143	313
	04/26/11	6.7	<0.50	0.56	3.5	8.3	1583.05	7.44	2.27	87	249
	10/28/11	130	1.3	<0.50	12	110	1583.00	7.30	2.07	137	362
	04/27/12	10	<0.25	<0.17	0.50	16	1583.07	7.32	2.39	141	328
	01/08/14	33	2.0	0.55	5.0	91	1583.19	6.78	2.19	152	395
	04/10/14	30	1.2	<0.17	1.1	19	1583.42	6.82	2.34		237
	10/28/14	48	1.5	<0.17	0.38	55	1583.62	6.25	1.11		257
	04/27/15	23	1.4	<0.17	1.1	19	1583.11	6.67	1.96		255
	10/20/15	<0.42	2.3	<0.37	24	46	1583.29	6.58	1.95	187	450
	05/25/16	19	<0.35	<0.37	0.52	19	1583.39	6.48	2.15	238	164
	11/16/16	64	2.3	<0.37	<0.16	42	1583.43	7.19	1.65	182	267
	04/27/17	17	<0.35	<0.37	<0.16	11	1583.81	7.26	1.99	220	162
	10/31/17	46	0.91	<0.37	1.7	22	1583.63	6.83	2.23	204	293
	04/27/18	6.0	<0.35	2.5	0.96	4.5	1583.97	6.89	2.28	131	180
	10/30/18	84	2.5	0.97 J	0.71 J	27	1583.45	7.96	2.06	309	236
	04/08/19	19	0.65	<0.37	0.70	7.9	1583.54	7.19	3.05	224	225
	10/28/19	22	0.76	<0.37	0.26	12	1583.59	7.05	2.80	231	223
	05/26/20	31	1.2	0.64 J	0.62	9.6	1583.49	6.81	2.46	257	166
	10/26/20	67	2.70	<0.37	0.47 J	48	1583.53	7.54	2.46	241	263
	04/15/21	6.1	<0.35	0.41 J	0.88	3.7	1583.62	7.31	2.32	272	164
	10/26/21	160	3.4	<0.37	<0.16	57	1583.32	7.65	3.10	202	320

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1591.42 ft MSL											
MW-18 (17')	11/01/93	44	0.93	2200	200	ND					
	01/01/94	ND	ND	8000	530	ND					
	07/01/94	15	ND	75	13	ND					
	01/01/95	6.3	ND	4.2	21	ND					
	06/01/95	ND	ND	4.1	1600	950					
	01/01/96	6.7	ND	110	100	ND					
	06/06/96	3.9	ND	51	34	ND					
	01/01/97	16	ND	500	130	ND					
	10/01/97	20	ND	290	150	ND					
	04/01/98	3.3	ND	37	13	ND					
	11/01/98	24	0.84	41	43	ND					
	06/01/99	19	ND	5.1	28	ND					
	12/01/99	Not Sampled because well was bent in collision									
	06/01/00	220	3.3	4.9	43	1.7					
	01/01/01	9.9	ND	34	76	ND					
	12/01/01	<0.50	ND	3.4	1.8	ND					
	06/01/02	1	ND	5.2	3.6	ND					
	12/01/02	1.9	ND	6.5	6	1.2					
	11/01/03	1.3	ND	1.6	1.1	ND					
	12/07/04	1.1	<0.4	5.7	2	0.43	1582.96	8.41	1.33	42	475.8
	03/22/05	1.6	<0.6	4.5	2.9	0.66	1581.92	8.69	1.98	52	479.8
	08/31/05	670	7.7	470	2700	1.3	1582.13	6.50	1.11	292	328
	02/14/06	2.9	<0.6	6.8	7.7	0.39	1581.88	7.25	1.93	158	280.7
	05/22/06	1.2	<0.4	3.1	2.2	1.7	1582.47	7.22	2.37	155	339.9
	08/08/06	37	<0.4	7.7	83	1.7	1582.44	7.48	1.89	256	431
	11/29/06	250	1.8	16	140	4	1582.45	7.00	1.51		305
	02/26/07	27	<0.4	1.2	2.4	7.1	1582.60	6.75	1.29	361	595
	05/23/07	<0.4	<0.5	1.8	0.27	0.8	1582.90	7.68	1.93		573
	08/22/07	110	1.1	3	22	11	1582.35	5.88	1.46	204	309
	11/29/07	0.4	<0.5	2.5	1.3	0.89	1582.62	6.56	1.84	304	793
Qtr	07/29/08	18	<0.5	3.1	2.5	1.9	1582.53	6.91	2.22	346	506
Pilot Study	09/11/08	490	5.3	3.3	23	24	1582.23	7.15	2.15	375	293
Pilot Study	10/09/08	4.4	<0.5	4.3	1.5	5.9	1582.46	6.92	2.27	425	600
Qtr	11/21/2008	1.3	<0.5	1.5	0.69	2.1	1582.25	7.23	1.62	191	638
Pilot Study	12/17/2008	3.0	<0.50	1.1	0.54	1.9	1582.16	7.29	1.28	304	597
Qtr	2/11/2009	<0.4	<0.5	3.7	<0.15	<0.15	1581.86	7.48	1.61	354	255
Qtr	5/21/2009	<0.4	<0.5	3	<0.15	<0.15	1582.61	7.96	2.16	237	320
Pilot Study	8/5/2009	320	3.5	2.1	25	13	1582.09	6.05	2.37	262	331
Qtr	11/19/2009	1.4	<0.5	1.9	0.31	4.9	1582.38	6.28	2.18	288	614
	02/25/10	75	1.1	0.46	0.26	29	1582.27	6.78	1.51	228	558
	05/11/10	0.9	<0.25	0.86	<0.21	1.4	1582.40	7.14	1.32	319	569
	10/25/10	<0.5	<0.5	2.5	1.3	0.54	1583.29	6.42	2.12	172	457
	04/26/11	<0.5	<0.5	<0.50	<0.20	0.21	1582.69	7.68	2.36	197	599
	10/28/11	17	<0.50	<0.50	0.90	3.9	1582.88	6.93	2.13	193	601
	04/27/12	3.7	<0.25	<0.17	0.32	1.7	1582.90	6.99	2.46	189	584
	01/08/14	0.75	<0.25	<0.17	0.39	<0.10	1583.08	6.92	2.07	202	488
	04/10/14	0.79	<0.25	<0.17	<0.19	<0.10	1582.86	6.68	2.28		414
	10/28/14	0.51	<0.25	<0.17	1.4	<0.10	1583.50	6.33	0.90		348
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1582.88	6.43	2.12		449
	10/20/15	97	<0.35	<0.37	8.0	2.6	1583.18	6.38	2.23	244	466
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.38	6.78	2.16	239	352
	11/16/16	0.52	<0.35	0.91	1.1	<0.20	1583.33	7.24	1.99	219	396
	04/27/17	<0.41	<0.35	1.1	<0.16	<0.20	1583.62	7.32	2.31	257	332
	10/31/17	1.0	<0.35	<0.37	0.48	<0.20	1583.43	6.46	1.47	384	331
	04/26/18	0.49	<0.35	0.43	<0.16	<0.20	1582.93	6.86	2.34	157	340
	10/30/18	1.8	<0.23	0.33 J	0.98 J	0.69 J	1583.36	6.94	2.13	375	314
	04/08/19	2.20	<0.35	0.50 J	0.17 J	0.51 J	1582.99	7.35	3.40	252	294
	10/28/19	0.81	<0.35	1.4	0.69	<0.20	1583.44	6.96	2.45	335	251
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.40	6.88	2.32	349	234
	10/26/20	<0.41	<0.35	0.82 J	0.61	0.30 J	1583.33	7.57	2.57	315	323
	04/15/21	<0.41	<0.35	0.53 J	<0.16	<0.20	1583.18	7.64	2.87	310	264
	10/26/21	0.76 J	<0.35	0.61 J	0.81	1.9	1583.26	7.45	3.07	233	378
Top of Casing Elevation = 1591.60 ft MSL											
MW-18A (61')	05/25/16	0.91	<0.35	0.86	0.62	<0.20	1583.32	8.07	1.23	-319	321
	11/16/16	<0.41	<0.35	1.3	0.60	<0.20	1583.26	7.76	1.74	115	331
	04/27/17	<0.41	<0.35	1.1	0.84	<0.20	1583.52	8.22	2.12	229	338
	10/31/17	<0.41	<0.35	1.2	1.0	<0.20	1583.29	7.90	2.32	131	331
	04/26/18	0.60	<0.35	0.98	1.0	<0.20	1582.53	6.88	2.54	122	287
	10/30/18	<0.21	<0.23	<0.14	0.63 J	<0.18	1583.22	6.96	2.57	368	256
	04/08/19	<0.41	<0.35	0.75 J	0.85	<0.20	1582.76	7.09	2.40	224	257
	10/28/19	<0.41	<0.35	<0.37	0.80	<0.20	1583.31	6.98	2.48	306	247
	05/26/20	<0.41	<0.35	0.58 J	1.0	<0.20	1583.36	6.60	2.29	311	237
	10/26/20	<0.41	<0.35	0.59 J	0.94	<0.20	1583.26	7.52	1.94	213	231
	04/15/21	<0.41	<0.35	0.64 J	1.1	<0.20	1582.97	6.94	2.01	300	234
	10/26/21	<0.41	<0.35	0.58 J	0.88	<0.20	1583.21	7.46	2.02	174	234

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1591.73 ft MSL											
MW-19	11/01/93	35	0.65	2.3	12	ND					
(17')	01/01/94	75	ND	18	9	ND					
	07/01/94	360	1.5	53	110	ND					
	01/01/95	ND	ND	16	9.4	0.9					
	06/01/95	ND	ND	680	630	1.7					
	01/01/96	4.1	ND	11	170	ND					
	06/06/96	64	72	230	37	ND					
	01/01/97	73	ND	39	11	ND					
	10/01/97	150	5.5	54	50	ND					
	04/01/98	120	2.8	42	38	ND					
	11/01/98	200	5	45	83	ND					
	06/01/99	390	ND	280	210	ND					
	12/01/99	450	ND	52	120	ND					
	06/01/00	580	<7.4>	140	160	ND					
	01/01/01	<0.33>	ND	1.6	<0.35>	ND					
	12/01/01	0.91	ND	8.4	1.2	ND					
	06/01/02	93	ND	67	23	ND					
	12/01/02	55	ND	35	16	ND					
	11/01/03	14	ND	3.4	11	ND					
	12/07/04	68	0.64	71	20	<0.3	1582.89	8.85	1.89	-8	262.7
	03/23/05	250	3.6	250	92	<0.24	1581.85	8.84	1.95	27	461.8
	09/01/05	320	<12	41	95	<2.4	1582.20	6.47	1.91	307	185.3
	02/15/06	220	<12	45	66	<2.4	1581.85	7.26	1.38	159	190.3
	05/23/06	270	<4.0	45	55	<1.5	1582.43	7.12	1.27	154	171.1
	08/08/06	370	<4.0	34	79	2.9	1582.47	7.25	1.79	311	215
	11/29/06	400	6.7	23	110	8.1	1582.45	6.95	1.56		226
	02/26/07	130	3.9	6.3	46	3.9	1582.77	6.77	1.84	267	288
	05/23/07	170	4.2	21	51	3.5	1583.01	7.52	1.97		267
	08/22/07	70	2.6	6.6	26	3	1582.52	6.05	2.30	311	192
	11/29/07	65	2	7.3	17	1.7	1582.69	6.36	1.91	255	263
Qtr	07/29/08	56	1.8	5.6	13	1.6	1582.69	6.95	1.98	288	179
Pilot Study	09/11/08	40	<1.0	0.81	7.6	1.1	1582.40	6.93	1.85	145	366
Pilot Study	10/09/08	40	<1.0	<0.8	1.5	0.83	1582.57	6.92	2.14	112	995
Qtr	11/21/2008	33	<1.0	0.81	7	1.5	1582.34	7.30	1.50	114	634
Pilot Study	12/17/2008	13	<1.0	<0.80	0.64	<0.30	1582.28	7.27	1.82	98	607
Qtr	2/11/2009	23	<0.5	4.9	2.8	<0.15	1581.87	7.38	1.92	117	473
Qtr	5/21/2009	28	<0.5	4.5	4.7	0.9	1582.66	8.55	1.70	226	427
Pilot Study	8/5/2009	45	0.65	0.81	1.4	3.6	1582.27	5.99	2.16	190	391
Qtr	11/19/2009	35	0.69	3.1	3	8.9	1582.45	6.31	1.73	181	382
	02/25/10	32	0.68	1.3	2.3	11	1582.35	6.70	2.04	165	403
	05/11/10	51	1	4.7	4.9	14	1582.48	6.85	2.14	157	419
	10/25/10	61	0.88	0.67	2.7	19	1583.32	6.39	2.07	133	410
	04/26/11	74	0.97	5.8	24	12	1582.66	7.36	2.10	98	405
	10/28/11	110	1.2	<0.50	4.2	22	1582.92	7.24	1.54	142	451
	04/27/12	46	1.0	<0.17	1.2	110	1582.89	7.17	2.14	138	439
	01/08/14	120	1.4	<0.17	3.2	23	1583.10	6.82	2.15	138	391
	04/10/14	48	0.58	<0.17	2.0	13	1582.64	6.79	2.14		291
	10/28/14	290	3.5	<0.17	20	32	1583.51	6.14	1.16		335
	04/27/15	170	2.5	1.3	30	26	1582.89	6.69	2.25		443
	10/20/15	110	1.5	<0.37	4.6	24	1583.24	6.23	2.26	198	401
	05/25/16	10	<0.35	1.2	2.6	98	1583.40	6.51	2.28	252	282
	11/16/16	<0.42	2.7	1.2	45	31	1583.39	6.97	1.51	172	357
	04/27/17	17	<0.35	4.6	7.3	5.8	1583.62	7.20	2.32	200	289
	10/31/17	<0.42	4.5	3.6	72	53	1583.44	6.40	1.97	202	335
	04/26/18	72	<0.35	2.1	0.94	4.7	1582.76	6.83	2.25	124	277
	10/30/18	270	3.5	2.6	55	41	1583.39	6.95	2.56	261	354
	04/08/19	5.1	<0.35	2.4	<0.16	3.5	1583.00	7.11	2.21	242	258
dupl	10/28/19	57	0.67 J	1.3	15	20	1583.45	6.98	2.44	218	342
	05/26/20	190	1.8	3.8	36	26	1583.46	6.86	2.49	311	327
	10/26/20	140	1.2	<0.37	10	50	1583.37	7.78	2.52	189	351
	04/15/21	19	<0.35	12	11	7.5	1583.15	6.80	2.39	302	292
	10/26/21	140	1.3	<0.37	4.8	44	1583.30	7.55	3.23	231	332

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
		Top of Casing Elevation = 1592.04 ft MSL									
MW-19A	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.37	7.85	2.27	-221	237
	11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.40	7.83	2.07	102	212
	04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.60	8.36	2.01	97	206
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.45	8.11	2.29	255	211
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.43	6.88	2.21	86	201
	10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1583.40	6.94	1.43	198	200
	04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.70	7.02	2.65	209	193
	10/29/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.44	6.95	2.65	177	199
	05/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.50	6.63	1.81	204	194
	10/26/20	<0.41	<0.35	<0.37	<0.16	<0.20	1583.38	7.47	1.64	191	192
	04/15/21	<0.41	<0.35	<0.37	<0.16	<0.20	1583.08	6.85	2.10	310	204
	10/26/21	<0.41	<0.35	<0.37	<0.16	<0.20	1583.31	7.54	2.18	226	196
		Top of Casing Elevation = 1593.78 ft MSL									
MW-20 (16.5')	07/29/08	<0.4	<0.5	<0.4	<0.15	<0.15	1584.10	7.18	1.88	296	152
	9/11/2008	<0.4	<0.5	<0.4	<0.15	<0.15	1583.77	7.27	1.47	149	137
	10/9/2008	<0.4	<0.5	1.4	<0.15	<0.15	1583.90	7.48	1.48	111	139
	11/21/2008	<0.4	<0.5	<0.4	<0.15	<0.15	1583.65	8.26	0.99	297	134
	12/17/2008	No VOC sample					1583.58	7.81	1.17	85	136
	2/11/2009	<0.4	<0.5	<0.4	<0.15	<0.15	1583.17	7.58	1.36	322	135
	5/21/2009						1583.94	7.07	1.03	351	164
	8/5/2009						1583.64	6.74	2.04	374	154
	05/11/10	<0.25	<0.25	0.56	<0.21	<0.22	1583.76	7.51	1.84	132	144
	10/25/10	<0.5	<0.5	1.8	<0.2	<0.2	1584.60	6.83	2.18	216	197
	10/28/11	<0.50	<0.50	0.78	<0.20	<0.20	1584.20	6.82	1.74	225	139
	04/27/12	<0.12	<0.25	4.6	<0.19	<0.10	1584.16	6.89	2.02	221	142
	01/08/14	<0.12	<0.25	0.58	0.28	<0.10	1584.35	6.81	2.13	229	129
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1584.10	6.61	2.22	221	141
	05/25/16	<0.41	<0.35	3.2	<0.16	<0.20	1584.52	7.14	2.25	362	211
	04/27/17	<0.41	<0.35	3.6	<0.16	<0.20	1584.74	7.35	2.38	282	197
	04/26/18	<0.41	<0.35	4.6	<0.16	<0.20	1583.82	6.85	2.55	225	159
	04/08/19	<0.41	<0.35	3.6	<0.16	<0.20	1584.04	7.07	2.81	228	192
	05/26/20	<0.41	<0.35	0.62 J	<0.16	<0.20	1584.67	7.08	2.24	307	126
	10/26/20	not sampled					1584.52				
	04/15/21	<0.41	<0.35	2.4	<0.16	<0.20	1584.26	7.34	2.43	346	149
	10/26/21	not sampled					1584.47				
		Top of Casing Elevation = 1591.51 ft MSL									
MW-21 (15')	07/29/08	77	10	23	6.8	0.49	1580.70	7.18	1.88	296	152
	9/11/2008	430	3.5	35	37	3	1580.61	6.83	2.33	220	212
Pilot Study	10/9/2008	490	<10	36	42	6.2	1580.90	6.81	2.42	242	226
Qtr	11/21/2008	450	<10	32	42	<3.0	1580.80	7.58	1.56	253	208
Pilot Study	12/17/2008	500	<10	36	58	<3.0	1580.57	7.68	2.02	234	205
Qtr	2/11/2009	98	1.1	21	12	<0.15	1580.44	7.63	2.03	301	212
Qtr	5/21/2009	50	<0.5	9.3	3.4	3	1581.40	7.39	2.01	325	240
Pilot Study	8/5/2009	91	1.1	18	5	1.6	1580.99	5.84	2.92	441	267
Qtr	11/19/2009	600	12	32	15	12	1581.34	6.27	1.94	388	225
	02/25/10	480	7.4	24	7.9	20	1581.35	7.15	2.61	173	224
	05/11/10	530	5.3	18	7.1	29	1581.50	7.29	2.29	276	221
	10/25/10	9.7	<0.5	10	0.54	0.89	1582.37	6.28	1.86	317	142
	04/26/11	73	1.2	41	5.3	22	1581.77	7.22	2.17	318	163
	10/28/11	75	1.1	14	1.3	28	1582.09	6.83	2.57	312	150
	04/27/12	23	<0.25	9.9	0.53	4.3	1582.22	6.91	2.23	315	152
	01/09/14	1.3	<0.25	19	0.75	<0.10	1582.83	7.05	2.21	319	192
	04/10/14	0.89	<0.25	35	1.1	<0.10	1582.99	6.77	2.24	432	203
	10/28/14	<0.12	<0.25	3.4	<0.19	<0.10	1583.56	6.17	0.89		220
	04/27/15	<0.12	<0.25	22	0.87	<0.10	1582.71	6.47	2.34		220
	10/20/15	4.6	<0.35	13	0.80	1.2	1582.97	6.05	2.51	405	125
	05/25/16	<0.41	<0.35	6.3	<0.16	<0.20	1584.42	6.37	2.20	443	92
	11/16/16	<0.41	<0.35	10	<0.16	<0.20	1583.02	7.75	1.71	379	112
	04/27/17	<0.41	<0.35	5.5	<0.16	<0.20	1584.19	6.91	2.13	421	124
	10/31/17	0.83	<0.35	4.4	<0.16	<0.20	1583.43	6.25	2.48	478	103
	04/26/18	1.8	<0.35	88	2.3	<0.20	1582.66	7.01	2.71	289	83
	10/30/18	<0.21	<0.23	5.4	<0.20	<0.18	1583.14	7.07	2.33	424	88
	04/08/19	<0.41	<0.35	7.5	0.19 J	<0.20	1583.13	7.55	3.79	351	175
	10/28/19	<0.41	<0.35	2.3	<0.16	<0.20	1583.48	7.23	2.47	332	91
	05/26/20	1.6	<0.35	10	0.19 J	<0.20	1583.24	7.10	2.53	375	97
	10/26/20	<0.41	<0.35	3.9	<0.16	<0.20	1583.53	7.57	2.35	347	79
	04/15/21	<0.41	<0.35	5.1	<0.16	<0.20	1583.53	7.10	2.79	407	127
	10/26/21	1.7	<0.35	4.1	<0.16	<0.20	1583.65	7.35	4.94	421	95

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Top of Casing Elevation = 1592.66 ft MSL											
MW-21A (42')	07/29/08	4.6	<0.5	0.91	0.23	0.34	1582.73	7.89	1.59	25	209
	9/11/2008	8.5	<0.5	1.2	1.4	0.97	1579.13	7.92	1.12	243	208
Pilot Study	10/9/2008	14	<0.5	2	3.3	1.4	1579.24	7.98	2.04	226	215
Qtr	11/21/2008	4.6	<0.5	1.7	2.5	<0.15	1576.29	8.51	1.35	303	222
Pilot Study	12/17/2008	2.9	<0.50	1.5	2.1	<0.15	1579.44	8.49	1.30	2.08	213
Qtr	2/11/2009	16	<0.50	1.4	1.9	1.3	1579.08	7.67	2.13	213	220
Qtr	5/21/2009	9.2	<0.5	0.99	1.1	1	1579.75	7.65	2.02	188	217
Pilot Study	8/5/2009	31	0.6	1.1	1.8	5.5	1579.49	7.52	1.41	263	217
Qtr	11/19/2009	22	<0.5	1.7	5	3.1	1578.31	7.92	1.97	387	219
	02/25/10	5.2	<0.5	0.85	1.3	0.49	1578.81	7.93	2.35	137	215
	05/11/10	5.9	<0.25	0.7	0.91	0.74	1580.05	8.67	2.24	147	220
	10/25/10	14	<0.5	0.53	0.71	3.4	1581.00	7.77	2.02	249	2.38
	04/26/11	8.0	<0.50	2.9	3.3	1.4	1582.24	8.07	1.93	143	285
	10/28/11	5.8	<0.50	1.9	2.3	0.97	1579.50	6.80	1.81	198	283
	04/27/12	12	<0.25	2.3	2.8	1.8	1577.42	6.89	1.89	202	282
	01/09/14	3.4	<0.25	0.55	0.92	<0.10	1581.43	7.05	2.21	319	192
	04/10/14	2.3	<0.25	1.1	1.2	<0.10	1580.98	6.75	1.91		392
	10/28/14	5.8	<0.25	0.55	0.91	<0.10	1582.15	7.22	0.81		314
	04/27/15	8.0	<0.25	<0.17	1.7	1.5	1581.12	6.83	2.47		369
	10/20/15	18	<0.35	4.5	4.8	3.1	1581.93	7.29	1.17	331	348
	05/25/16	46	<0.35	2.2	6.9	4.0	1581.70	7.48	1.25	338	359
	11/16/16	31	0.52	1.4	2.8	3.2	1581.47	7.48	1.85	309	356
	04/27/17	37	<0.35	2.1	4.2	4.4	1579.55	8.18	2.36	327	353
	10/31/17	51	0.83	2.0	4.4	4.7	1580.34	7.57	1.94	405	381
	04/26/18	53	0.64	2.8	7.0	5.6	1581.19	6.94	2.30	271	365
	10/30/18	30	<0.23	0.58 J	3.5	1.9	1578.47	7.02	1.77	409	357
	04/08/19	32	0.54 J	0.82 J	2.3	3.0	1580.50	7.14	3.02	334	330
	10/28/19	42	<0.35	<0.37	3.1	5.2	1581.47	7.07	2.43	344	358
	05/26/20	39	0.67 J	1.1	2.6	9.7	1582.17	6.80	1.79	360	353
	10/26/20	41	0.70 J	1.4	3.8	3.9	1582.32	7.46	1.49	360	359
	04/15/21	50	0.98 J	1.0	3.3	7.7	1575.04	7.14	2.11	407	353
	10/26/21	73	1.2	0.90 J	3.5	2.5	1583.39	7.43	2.34	329	343
GW Outfall (Discharge)	Mar-96			3.6	5.2						
	Jun-96			4.6	4.9						
	Sep-96			5.6	nd						
	Dec-96			2.5	3.9						
	Mar-97			2.4	nd						
	Jul-97			2.6	4.3						
	Sep-97			3.6	nd						
	Dec-97			2.1	4.3						
	Mar-98			1.8	nd						
	Jun-98			1.6	2.7						
	Sep-98			1.2	nd						
	Dec-98			1.6	2.7						
	Mar-99			1.5	nd						
	Jun-99			1.3	2.4						
	Sep-99			1.4	nd						
	Dec-99			1	2.7						
	Apr-00			0.96	nd						
	Jun-00			1.1	3						
	Sep-00			2.5	nd						
	Dec-00			1.8	3.8						
	Mar-01			1.6	nd						
	Jun-01			3	4.4						
	Oct-01			1.2	nd						
	Dec-01			1.1	2.5						
	Mar-02			1.1	2.5						
	Jun-02			1	2.8						
	Sep-02			0.6	1.3						
	Dec-04			0.34	1.2						
	10/25/10	2.7	<0.5	1.1	1.4	<0.2					
	04/26/11	2.9	<0.50	1.8	2.0	<0.20	8.29	5.53	284	316	
	10/27/11	1.8	<0.50	0.95	1.1	<0.20	6.97	1.67	243	337	
	04/27/12	2.0	<0.25	0.61	0.69	<0.10	7.21	4.97	213	329	
	01/09/14	1.2	<0.25	0.53	0.93	<0.10	7.07	3.27	251	334	
	04/10/14	1.1	<0.25	<0.17	0.65	<0.10	6.70	4.77		258	
	10/28/14	1.2	<0.25	0.47	0.75	<0.10	7.12	1.47		220	
	04/27/15	1.7	<0.25	<0.17	0.96	<0.10	6.61	3.55		247	
	10/20/15	2.0	<0.35	<0.37	1.0	<0.20	7.77	4.81	253	355	
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	8.15	4.09	388	380	
	11/16/16	2.1	<0.35	0.60	0.92	<0.20	7.45	4.61	117	365	
	04/27/17	0.87	<0.35	<0.37	0.50	<0.20	8.31	4.06	117	288	
	10/31/17	1.8	<0.35	<0.37	1.1	<0.20	7.86	4.17	141	366	
	04/26/18	1.7	<0.35	<0.37	1.0	<0.20	6.78	4.63	91	364	
	10/30/18	1.4	<0.23	0.34 J	0.82 J	<0.18	6.97	4.15	280	365	
	04/08/19	1.6	<0.35	<0.37	0.77	<0.20	7.02	3.07	190	358	
	10/28/19	<0.41	<0.35	<0.37	0.75	<0.20	6.93	2.74	228	369	
	05/26/20	2.1	<0.35	<0.37	1.0	<0.20	6.95	3.61	276	370	
	10/26/20	1.1	<0.35	<0.37	0.59	<0.20	7.56	3.58	207	376	
	04/15/21	<0.41	<0.35	<0.37	0.93	<0.20	7.37	2.46	301	379	
	10/26/21	1.5	<0.35	<0.37	0.79	<0.20	7.56	2.39	242	388	

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
LSD	07/09/84		<1.0	<1.0	<1.0						
Well-3	08/07/84			62	4						
	08/21/84			12	<1.0						
	05/27/86		<1.0	<1.0	<1.0	<7.0					
	06/09/86		<1.0	<1.0	<1.0	<7.0					
	10/19/87		<0.1	<0.1	<0.1						
	06/25/90	<0.5	<0.5	<0.2	<0.2	<0.2					
	02/27/91	<0.5	<0.5	<0.5	<0.2	<0.2					
	06/28/91	<0.5	<0.5	<0.5	<0.2	<0.2					
	03/22/92	<0.5	<0.5	<0.5	<0.2	<0.2					
	06/10/92	<0.5	<0.5	<0.5	<0.2	<0.2					
	09/30/02	<0.5	<0.5	<0.5	<0.2	<0.2					
	11/10/93	<0.1	<0.1	<0.5	<0.5	<0.2					
	07/06/94	<0.1	<0.1	<0.2	<0.1	<0.2					
	08/15/95	0.5	<0.1	2.8	2.7	<0.2					
	03/25/96	0.87	<0.1	3.4	3.6	<0.2					
	06/01/96	0.67	ND	3.1	3.4	ND					
	06/07/96	0.67	<0.1	3.1	3.4	<0.2					
	08/27/96	0.5	<0.1	<0.2	2.2	<0.2					
	12/16/96	0.24	<0.1	0.9	1	<0.2					
	01/01/97	ND	ND	1.5	1.4	ND					
	03/03/97	0.16	<0.1	0.52	0.46	<0.2					
	06/02/97	0.11	<0.1	0.33	0.34	<0.2					
	09/12/97	<0.1	<0.1	0.17	0.16	<0.2					
	10/01/97	ND	ND	1.5	0.32	ND					
	12/11/97	<0.1	<0.1	0.13	0.16	<0.2					
	03/03/98	<0.1	<0.1	<0.2	<0.1	<0.2					
	06/25/98	<0.1	<0.1	<0.2	<0.1	<0.2					
	09/01/98	ND	ND	ND	ND	ND					
	09/22/98	<0.1	<0.1	<0.2	<0.1	<0.2					
	11/01/98	ND	ND	0.17	0.19	ND					
	12/14/98	<0.1	<0.1	<0.2	<0.1	<0.2					
	03/16/99	<0.1	<0.1	<0.2	<0.1	<0.2					
	06/01/99	ND	ND	ND	ND	ND					
	12/01/99	ND	ND	<0.26>	ND	ND					
	01/25/00	<0.1	<0.1	<0.2	<0.1	<0.2					
	06/01/00	ND	ND	ND	<0.17>	ND					
	01/01/01	ND	<0.41>	<0.43>	ND	ND					
	01/24/01	<0.1	<0.1	0.35	0.32	<0.2					
	12/01/01	ND	ND	<0.23>	<0.31>	ND					
	02/05/02	<0.1	<0.1	<0.2	0.18	<0.2					
	06/02/02	ND	ND	<0.23>	<0.38>	ND					
	12/02/02	<0.44>	ND	0.56	1.2	ND					
	03/11/03	<0.1	<0.1	<0.2	0.77	<0.2					
	07/30/03	0.75	<0.1	0.66	1.7	<0.2					
	11/01/03	[0.59]	ND	0.59	1.4	ND					
	11/26/03	0.55	<0.37	0.63	1.4	<0.12					
	03/01/04	0.78	<0.1	0.71	1.7	<0.2					
	04/26/04	0.73	<0.1	0.59	1.4	<0.2					
	08/24/04	0.47	<0.1	0.44	1	<0.2					
	11/03/04	0.95	<0.1	0.93	2	<0.2					
	12/06/04	0.61	<0.4	0.64	1	<0.3					
	02/14/05	1.7	<0.17	1.8	3.6	<0.17					
	03/09/05	1.3	<0.17	1.4	2.7	<0.15					
	03/23/05	1.2	<0.6	0.93	2.2	<0.12		8.52	3.41	291	308.3
	04/25/05	0.87	<0.17	0.85	1.7	<0.17					
	08/09/05	[0.57]	<0.58	[0.46]	1	<0.54					
	09/01/05	<0.60	<0.60	0.48	1.1	<0.12		7.35	2.22	234	278.7
	02/15/05	<0.6	<0.6	<0.4	<0.15	<0.12		7.77	2.49	156	284.8
	03/06/06	1.8	<0.17	1.1	2	0.17					
	04/17/06	0.64	<0.17	0.47	0.88	<0.17					
	05/23/06	0.51	<0.4	0.43	0.58	<0.15		8.06	2.29	158	296.1
	08/08/06	0.9	<0.40	1	1.4	<0.15		8.81	2.72	176	359
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15		7.36	1.71		
	02/21/07	<0.26	<0.23	<0.19	<0.22	<0.12					
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15		7.95	2.96	293	224
	05/22/07	<0.4	<0.5	<0.4	<0.15	<0.15		7.46	1.31		237
	08/22/07	<0.4	<0.5	<0.4	<0.15	<0.15		7.23	3.90	211	361
	11/29/07	<0.4	<0.5	<0.4	<0.15	<0.15		7.73	2.22	319	386
	07/29/08	<0.4	<0.5	<0.4	<0.15	<0.15		7.83	3.08	209	397
	11/20/08	<0.4	<0.5	<0.4	<0.15	<0.15		8.54	1.74	334	413
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15					
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15		6.64	2.79	353	382
	08/05/09	<0.4	<0.5	<0.4	<0.15	<0.15		7.27	2.56	229	384
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15		7.52	2.52	209	389
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15		7.55	2.19	169	406
	05/12/10	<0.25	<0.25	<0.3	<0.21	<0.22		805.00	1.47	244	386
	10/25/10	<0.5	<0.5	<0.5	<0.2	<0.2		7.75	2.17	142	425

continued on next page

TABLE 3
Groundwater Sample Analytical Results
Minocqua Cleaners, Minocqua, WI

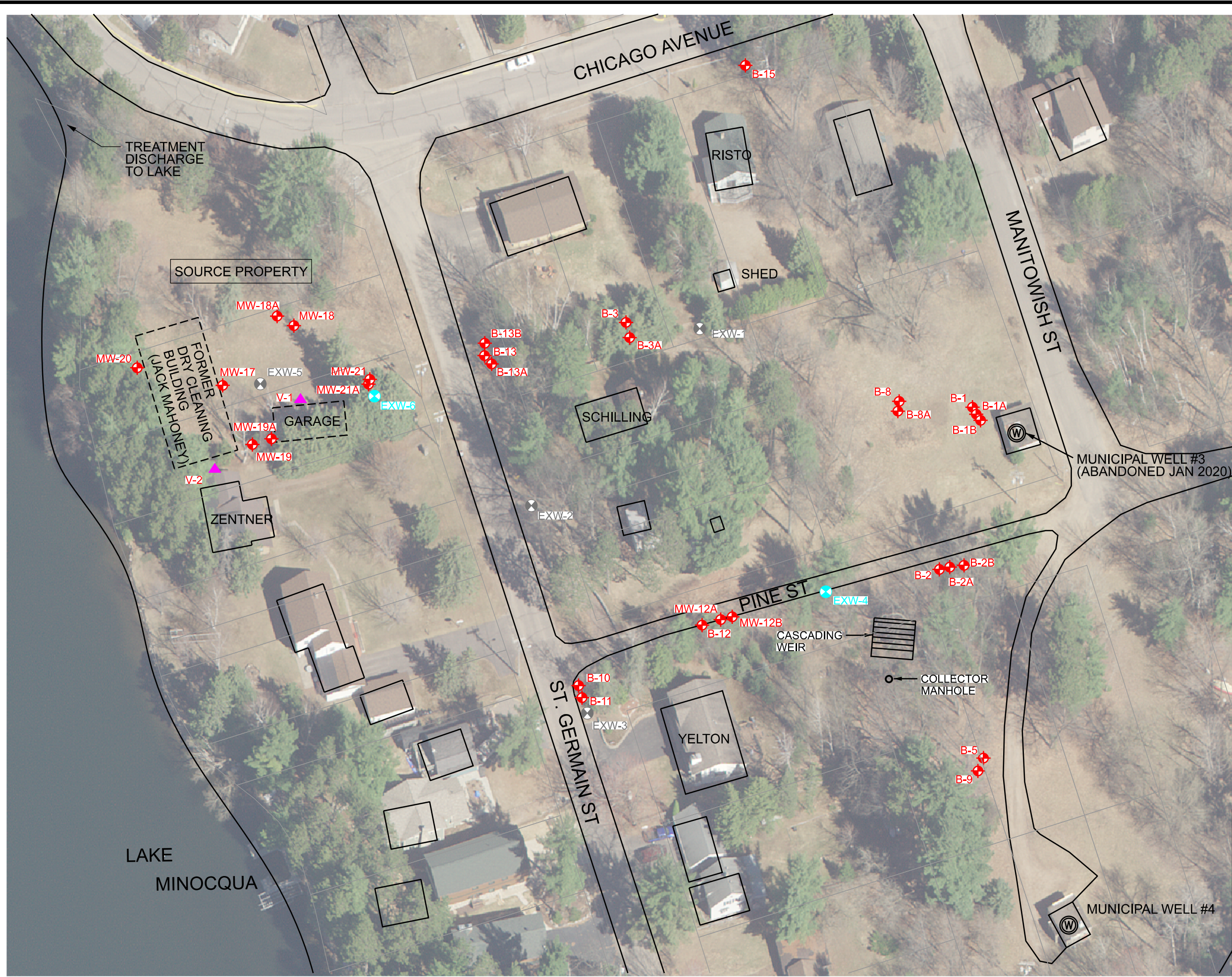
Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity
ES		70	100	5	5	0.2					
PAL		7	20	0.5	0.5	0.02					
Well-3 (cont.)		continued from previous page									
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20		8.17	2.95	117	379
	10/28/11	<0.50	<0.50	<0.50	<0.20	<0.20		6.89	2.14	183	447
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10		7.18	2.42	158	429
	01/09/14	<0.12	<0.25	<0.17	<0.19	<0.10		7.16	2.41	178	396
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10		7.06	2.46		389
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10		7.47	1.52		321
	04/28/15	<0.12	<0.25	<0.17	<0.19	<0.10		6.84	2.46		359
	10/20/15	<0.41	<0.35	<0.37	<0.16	<0.20		7.80	2.07	165	424
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20		7.97	2.32	280	432
	11/17/16	<0.41	<0.35	<0.37	<0.16	<0.20		7.83	2.53	310	427
	04/28/17	<0.41	<0.35	<0.37	<0.16	<0.20		8.24	4.41	388	423
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20		8.04	2.32	366	438
	04/27/18	<0.41	<0.35	<0.37	<0.16	<0.20		6.95	3.36	281	440
	10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18		6.94	4.43	423	446
	04/09/19	<0.41	<0.35	<0.37	<0.16	<0.20		6.86	4.68	406	465
	10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20		7.08	2.71	317	450
	05/26/20	Not sampled, well abandoned in January 2020									

Notes: Concentrations are in ug/L
MSL - mean sea level

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John Sager
Wisconsin Department of Natural Resources
December 16, 2021

FIGURES



LEGEND

- MONITORING WELL
 - EXTRACTION WELL (2)
 - ABANDONED EXTRACTION WELL (4)
 - VAPOR SAMPLE LOCATION
- V-1 = SUBSLAB
V-2 = DEEP SOIL PROBE



FIGURE 2

SITE LAYOUT MAP

MINOCQUA CLEANERS
MINOCQUA, WI

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CHICAGO AVENUE

MANITOWISH ST

PINE ST

ST. GERMAIN ST

TREATMENT DISCHARGE TO LAKE

SOURCE PROPERTY

FORMER DRY CLEANING BUILDING (JACK MAHONEY)

GARAGE

ZENTNER

RISTO

SHED

SCHILLING

YELTON

LAKE MINOCQUA





- LEGEND**
-  MONITORING WELL
 -  EXTRACTION WELL (2)
 -  ABANDONED EXTRACTION WELL (4)
 -  VAPOR SAMPLE LOCATION
- V-1 = SUBSLAB
V-2 = DEEP SOIL PROBE



FIGURE 3

WELL LOCATION MAP

MINOCQUA CLEANERS
MINOCQUA, WI



TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
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CHICAGO AVENUE

MANITOWISH ST

PINE ST

ST. GERMAIN ST

LAKE MINOCQUA

LEGEND







-  MONITORING WELL
-  EXTRACTION WELL (2)
-  ABANDONED EXTRACTION WELL (4)
-  (1582.94) B2B
-  GROUNDWATER FLOW DIRECTION
-  (1582.94) GROUNDWATER ELEVATION CONTOUR



FIGURE 4
 WATER TABLE FLOW DIRECTION
 OCTOBER 25-26, 2021
 MINOCQUA CLEANERS
 MINOCQUA, WI

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FORMER CLEANING DRY CLEANING BUILDING (JACK MAHONEY)

SOURCE PROPERTY

GARAGE

ZENTNER

MW-18A (1583.26)

MW-18

MW-20 (1584.47)

MW-17 (1583.32)

EXW-5

MW-21 (1583.65)

V-1

MW-21A

EXW-6

MW-19A

MW-19 (1583.30)

V-2

RISTO

SHED

B-15

B-13B

B-13 (1583.99)

B-13A

B-3

B-3A

EXW-1

SCHILLING

EXW-2

B-8

B-8A

B-1

B-1A

B-1B

(1582.94)

(1582.57)

MUNICIPAL WELL #3 (ABANDONED JAN 2020)

EXW-4

MW-12A

B-12

MW-12B (1582.63)

B-2

B-2A

B-2B

(1582.77)

CASCADING WEIR

COLLECTOR MANHOLE

YELTON

B-10

B-11 (1582.82)

EXW-3

B-5

B-9

(1582.44)

MUNICIPAL WELL #4

CHICAGO AVENUE

MANITOWISH ST

PINE ST

ST. GERMAIN ST

LAKE MINOCQUA

LEGEND

- MONITORING WELL
- EXTRACTION WELL
- ABANDONED EXTRACTION WELL

DATE	11/2016	1.4	TETRACHLOROETHYLENE
	2.8		TRICHLOROETHYLENE
	31		CIS-1,2-DICHLOROETHYLENE
	3.2		VINYL CHLORIDE
	38.4		CUMULATIVE

ALL CONCENTRATIONS ARE IN ug/L

CUMULATIVE VOCs (ug/L)

0.1-10
10-50
50-100
100-200

CONCENTRATIONS LISTED ARE FROM MOST RECENT ANALYSIS (SEE TABLE 2 FOR ADDITIONAL INFORMATION)



FIGURE 5
CVOC GROUNDWATER CONCENTRATIONS
OCTOBER 25-26, 2021
MINOCQUA CLEANERS
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CHICAGO AVENUE

MANITOWISH ST

PINE ST

ST. GERMAIN ST

TREATMENT DISCHARGE TO LAKE

SOURCE PROPERTY

FORMER DRY CLEANING BUILDING (JACK MAHONEY)

GARAGE

ZENTNER

RISTO

SHED

SCHILLING

YELTON

LAKE MINOCQUA

- LEGEND**
- MONITORING WELL
 - EXTRACTION WELL (2)
 - ABANDONED EXTRACTION WELL (4)
 - VAPOR SAMPLE LOCATION
- V-1 = SUBSLAB
V-2 = DEEP SOIL PROBE

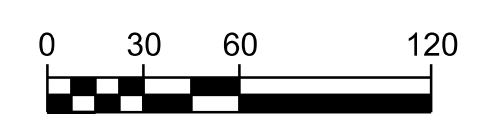
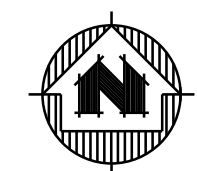


FIGURE 6
INTERPOLATED ZONE OF INFLUENCE
PUMPING WELL EXW-4

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